CALIFORNIA
OIL WORLD
and Petroleum Industry

Enlist that Scrap
... FOR THE DURATION

When you turn in your scrap *this month*, your obligation does not end. For the steel furnaces must run next month, too -- and the next -- and the next.

Steel production of eighty-five to ninety million tons of ingots a year calls for approximately 3,000,000 tons of scrap per month--about 750,000 tons a week--over 100,000 tons a day. Half of this comes from the industry itself, but the other half must come from the public.

Reduced to its simplest terms, if the steel industry is to produce steel at the rate and in the volume that our war program demands, then America must collect nearly ONE POUND OF SCRAP EVERY DAY for each man, woman and child in the nation.

You, the reader of this publication, have this clear, individual obligation: As a patriotic citizen and a responsible executive or workman, you must act to the extent of your ability to KEEP SCRAP FLOWING to the steel plants.

Do your part to enlist scrap for the duration.

WHY NOT TRY THIS YOUNGSTOWN IDEA?

Red-white-and-blue barrels like this stand on important street corners, in both business and residential districts of Youngstown, Ohio. They provide a convenient and tangible means of getting action from citizens, young and old, who are bombarded daily with radio, newspaper, magazine and other advertising urging them to turn in scrap.

That this is an effective idea is proven by the fact that two city trucks are kept busy every day, collecting scrap from these barrels and answering calls from householders who have other scrap to contribute, too large to go into the barrels. Perhaps YOUR city can try this plan, too.

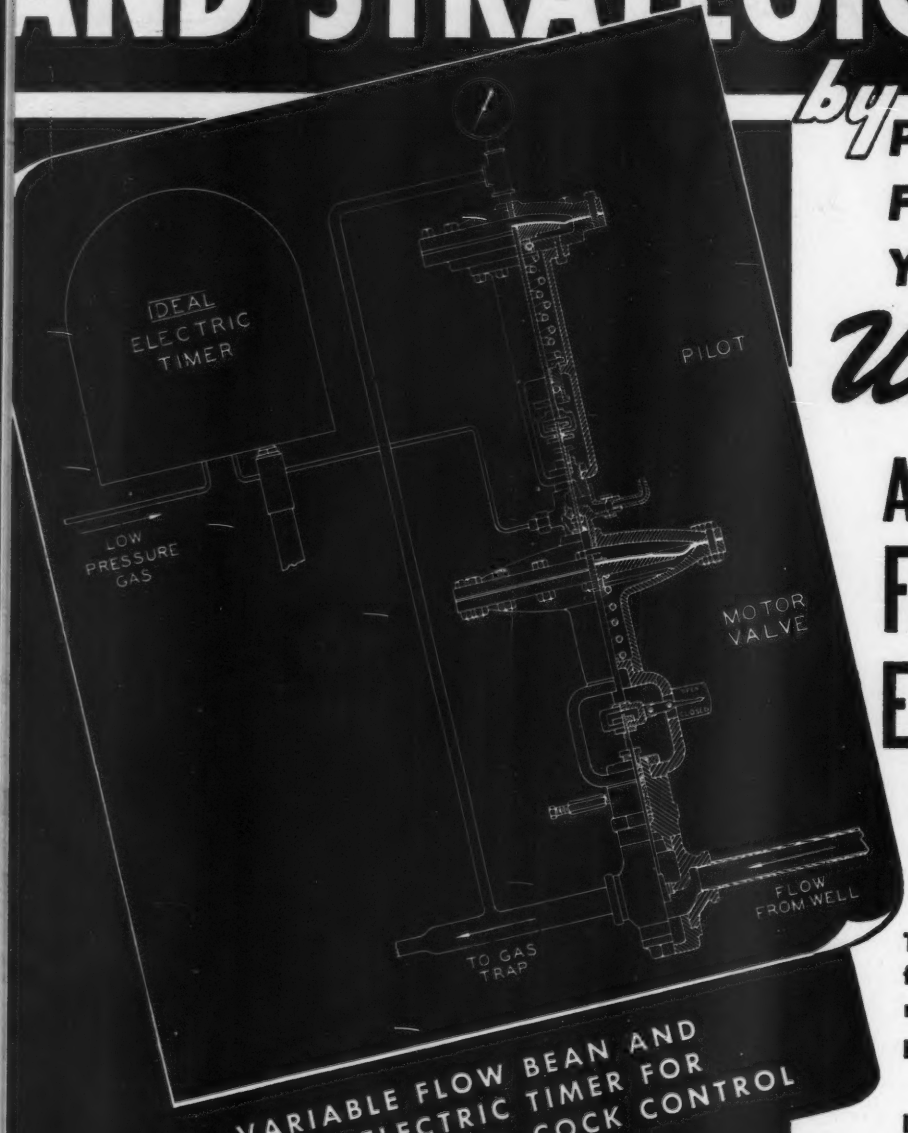
This Company joins in the counter attack against accidents by subscribing to the National Safety Council's War Production Fund to Conserve Manpower.

THE YOUNGSTOWN SHEET AND TUBE COMPANY
YOUNGSTOWN, OHIO

QUALITY TRADE MARK YOUNGSTOWN SERVICE

Vol. 35
No. 22
Whole
No. 1621

HELP CONSERVE STEEL AND STRATEGIC ALLOYS



VARIABLE FLOW BEAN AND IDEAL ELECTRIC TIMER FOR INTERMITTING STOP-COCK CONTROL

IMPORTANT: *The Same Equipment* (less pilot) is used to obtain low gas-oil ratios by controlling the injected gas when the well is put on gas lift.

Full Information Upon Request

by PROLONGING THE FLOWING LIFE OF YOUR WELLS

Use IDEAL

"Reg. U. S. Pat. Off."

AUTOMATIC VARIABLE FLOW BEAN AND ELECTRIC TIMER

An effective combination recently added to the IDEAL PROGRESSIVE GAS LIFT SYSTEM for timing and sensitive pressure control.

The pilot regulator and the motor valve form a variable bean which controls the rate of flow from the well—

By opening wide when the flow becomes sluggish;

By throttling when the well heads, thus protecting the gas trap and the meter against excessive flow pressures.

● An Ideal Electric Timer is used to open and close the motor valve to stop-cock the flow intermittently. This control method permits a larger opening of the conventional flow bean and results in a more uniform gas-oil mixture as well as a more uniform tubing pressure, thus tending to prolong the flowing life of the well.

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CALIFORNIA
OIL WORLD
and Petroleum Industry

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In the service of our country

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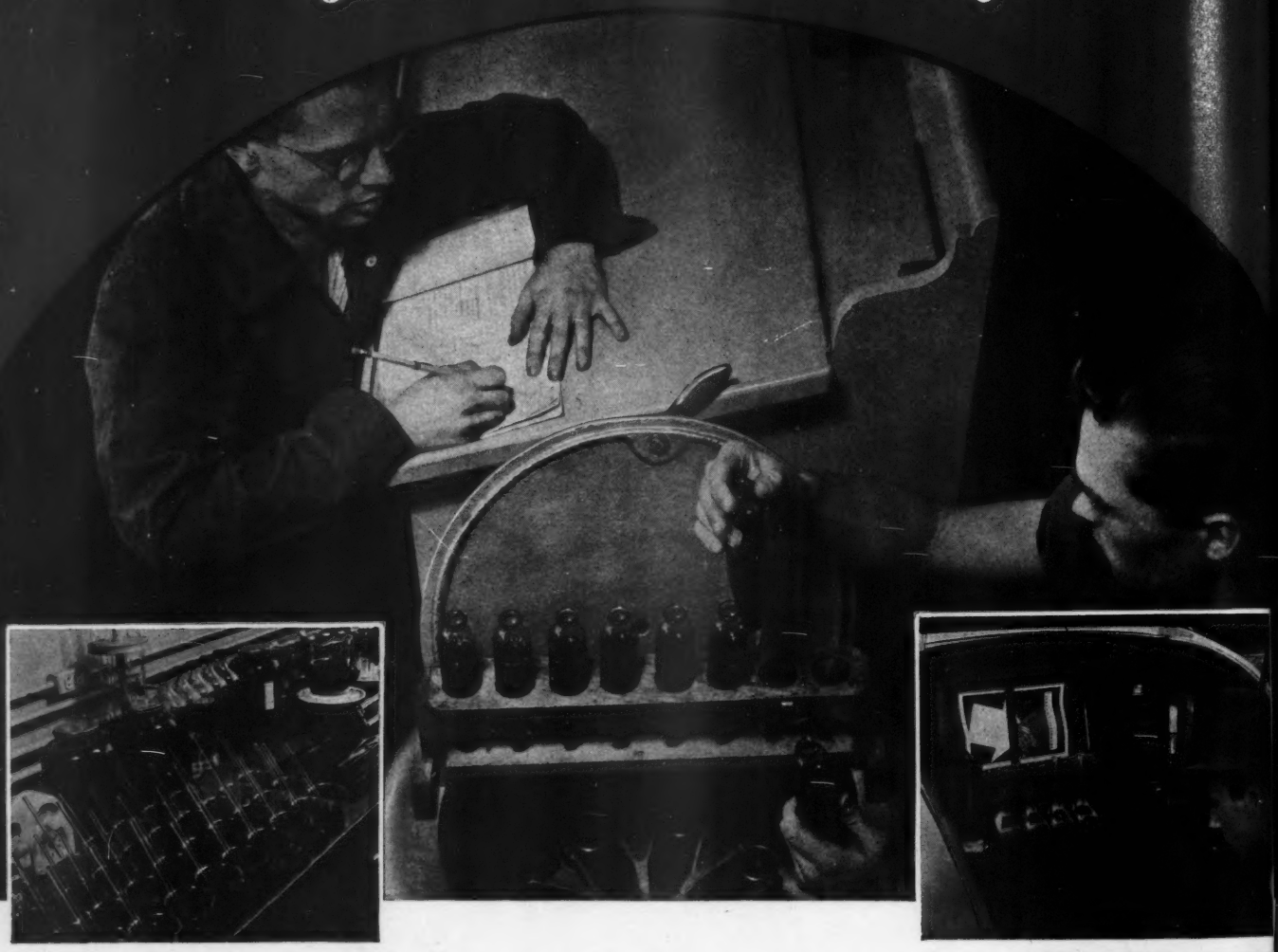
November 24, 1942

Telephone Number TUcker 2571

Round and Round to prove a point!



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Oil is Ammunition Treat it Right!

Administrative Highlights •

F.D.R. For Centralization

Greatly enhanced possibility that coordination of the oil industry's war efforts will be centralized under one agency appears in President Roosevelt's recent reply to Congressman Cole's letter (California Oil World, First Issue, November) in which the Congressman, now a Federal judge, sketched the work of the subcommittee on petroleum of which he has been chairman for the past nine years.

In his letter, which was a combination of review of the accomplishments of the committee, appreciation of his appointment to the Federal bench, and sketch of the present position of the industry, Judge Cole suggested that the price of oil and its products be established at a level commensurate with increased costs of operation caused by the war and that control over the oil industry be centralized in one place.

President's Viewpoint

In reply, the President said:

"The crucial importance of oil in the winning of the war cannot be overestimated. As you have so clearly pointed out, petroleum has made total war possible, and the assurance of adequate supplies of this fighting fuel for our combat forces and for war industry is indispensable to victory.

"In view of our greatly increased requirements for oil and its products, the problem of maintaining adequate petroleum reserves takes on an added significance. The immediate discovery of additional sources of oil is imperative. . . .

"I share your view that further centralization in the administration of oil matters is desirable. As a matter of fact, this subject has been under consideration for some time and I expect that a decision will be announced in the near future. Although the final details have not been determined, I think that the contemplated organization arrangement will meet in principle the recommendations that you have made.

In addition, the President's letter commended Judge Cole and his committee for their accomplishments in the past, and agreed with the recommendation that the committee should be continued in the future.

A.P.I. Meeting

The 23rd annual meeting of the American Petroleum Institute, which followed regular monthly meeting of the Petroleum Industry War Council in Chicago on consecutive days, highlighted activities of the industry during the second week of the month.

General discussion centered around the impact of the war on the industry, the most recent being the accentuating of the east coast supply problem through the opening of a "second front" in Africa by American forces. This action, which will require transportation of vast quantities of oil products, will lower available tonnage for transportation to the east coast, with the probable result that the current shortage will be intensified.

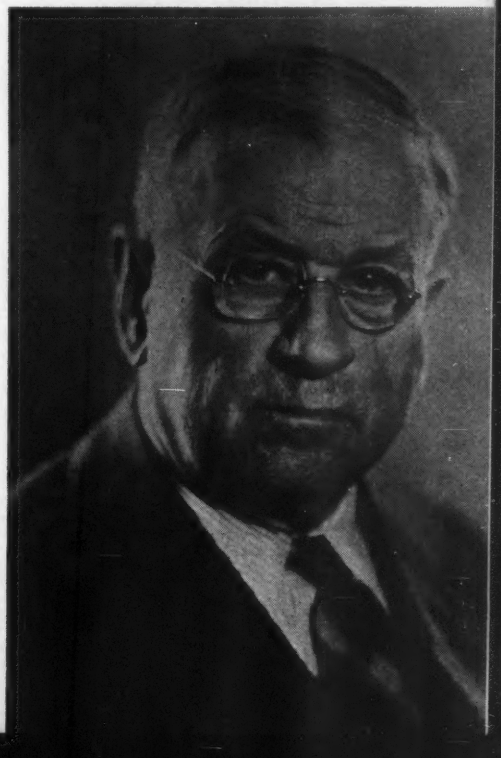
Government officials were represented at the A. P. I. meeting, including Coordinator Ickes, Deputy Coordinator Davies, and various members of the OPC staff, as well as Transportation Director Eastman and others whose rules and regulations affect the industry in one or more ways.

Ickes Praises Industry

Coordinator Ickes praised the industry for its accomplishments in the war, and stressed the necessity for further efforts. He pointed out that it is essential that the industry utilize every means to fulfill its war-born obligations, referring to complete "unitization" of the industry through joint use of facilities to conserve manpower and materials as an example in point. He called this plan the "most revolutionary step of all," since it marked "the abandonment of the hard-hitting, prodigal practices of peacetime free competition, and the inauguration of a far-reaching program."

The program is "not an adventure which either the oil industry or the OPC views with happiness" but was a step recognized as "an inescapable consequence of the shortage in materials and manpower which war has created," he said.

Coordinator Ickes also pledged that so long as he had anything to do with the relationship between the government and the oil industry, they would continue to be on a cooperative basis and in a spirit of mutual trust, to which he credited the accomplishments thus far made.



Harold L. Ickes
paper read at API meeting

Davies Stresses Joint Use

Deputy Coordinator Davies pointed out that war-caused dislocations of the industry would undoubtedly be intensified as the war progresses, saying that whereas the increasing war demand of the immediate past has been offset in part by decline in civilian consumption, he did not expect that course to continue.

As one way of meeting these dislocations, he urged the pooling of facilities through committees on joint use. As the war progresses, it is becoming more apparent, he said, that the normal "competitive order must give way to what we may call unitization." He reported that the legal road has been cleared for pooling of activities under the centralized direction of the OPC, and that while the OPC was not trying to define the exact working out of such pooling programs, the industry should study the problem and outline its own program.

"Appropriate Adjustments"

He also said that as the vast changes in normal practices come to pass, "it would be a most happy situation if appropriate adjustments might be quickly made in price structures or otherwise, to assure financial balance." He pointed out that the OPC policy was to preserve the economic health of the industry as far as possible, and that the OPC hopes that, "as the office is required to call on the oil industry for sharp and far-reaching changes in normal operation, and when this results from the demand of war, we shall be able to see the order followed promptly with appropriate financial relief."

Increase of Reserves

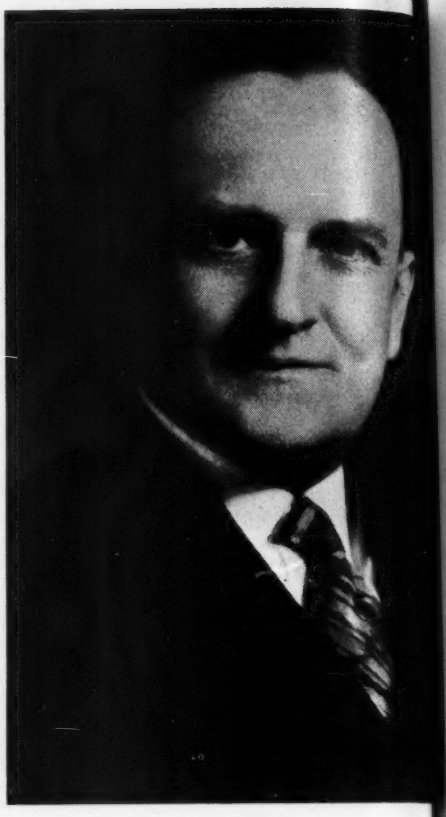
On the subject of increasing reserves, by increased crude prices, subsidies, or other methods of increasing the tempo of drilling, Mr. Davies said: "We in the OPC see no necessity for governmental entry into the oil business" and that, as to subsidy proposals, "we are skeptical though ready to give the fullest consideration to any proposal that promises a reasonable solution. The price incentive, we know, has a history to support it. Yet, in a controlled economy such as we have today, it is not the simple treatment it sounds. Traced from production through refining and marketing branches and considered in proper relation to the economy as a whole, it presents about as complex a problem as can be imagined. Then there is more to the question of price than the need for stimulating exploration. The changed and changing cost of operation, capital requirements, and tax provisions all have significant bearing." He said that the OPC was now studying the problem with a view to presenting its opinion to the OPA at the earliest possible date. He also said that he was "tempted to point out that it is one thing to pass a resolution urging price adjustment and it is something else to be prepared to support a recommendation with the facts and figures that are necessary to prove the case."

He recommended that companies who have been holding good prospective acreage until it suited the company position to drill proceed to drill that acreage. He said that he was not proposing a planned search for oil, but that a change in the development policy of the units in the industry "would accelerate in an important way the discovery of additional reserves."

Materials Cut Foreseen

Don R. Knowlton, OPC director of production, warned the industry that in 1943 it would probably have to get along with 20 per cent less material, which would make a cut of approximately 50 per cent from normal times. He said that "selective drilling is bound to come. And when it does, you will find drilling in some areas spread out to one well to 160 acres—maybe more — just enough drilling to define field limits and let us know how much oil we can plan on recovering. Materials are just that scarce."

Mr. Knowlton urged the industry not to lose sight of improved production methods in maintenance of production capacity and reserves. "We hear so much about the need for exploratory drilling that I wonder if improved production methods



W. R. Boyd, Jr.
reelected president American Petroleum Institute

such as pressure maintenance and gas and water repressuring are receiving the attention they merit." He cited a report in Oklahoma that half a billion barrels will be available through secondary recovery in that state, and said that "it takes a lot of wildcat drilling to uncover a reserve of that quantity."

Selective Drilling

Mr. Knowlton described selective drilling as similar, as to the oil industry's productive facilities, to what the Selective Service System has done with the nation's manpower. "The 1-A wells and production facilities—those from which material can be made readily available—will include presently idle wells, high water-oil ratio wells, high gas-oil ratio wells, closely spaced wells, and other production facilities that may be dispensed with without injuring ultimate recovery. Wells in the 1-B classification will include

those border-line cases—wells that are presently being produced profitably but which may be looked to as a source of materials and equipment if the materials shortage continues to be critical and the war is prolonged. Obviously, in such a classification, we reach a type of well that is the backbone of the nation's oil production. It is that type of well for which we will need repair and maintenance materials, in order that its productive capacity may be unimpaired. The weaker, unnecessary wells must be looked to as a source of materials with which to drill and maintain better wells, capable of contributing more to the war program."

Stressing the impending shortage of materials, he said that the OPC had recently asked the industry, through the district production committees, to survey its production facilities "to determine what quantities of materials may be reclaimed from those facilities and devoted to other uses, preferably without jeopardizing ultimate recovery of reserves."

"It is going to be absolutely essential," Mr. Knowlton said, "that in every case where it is possible to substitute an advanced operating practice for the use of material that such a practice be instituted. The industry has always taken the lead in developing improvements and I am confident that it will continue to do so."

California Directors

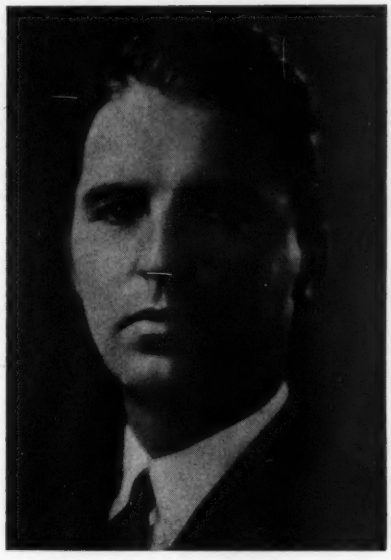
W. R. Boyd, Jr., president of the Institute, and all other officers and directors were re-elected. The 1943 meeting was also set for Chicago.

Californians elected to the A.P.I. Board include Dana Hogan, R. C. Stoner, and W. C. Whaley, production group; S. Belither and W. L. Stewart, refining group; Reese Taylor, marketing group; A. C. Mattei, at-large group; Lindsay Hanna and Ralph B. Lloyd, elected by the Board itself.

PIWC Meeting

One of the main points of discussion during the November meeting of the Petroleum Industry War Council, held in Chicago on the two days preceding the A.P.I. meeting, was the problem foreseen in supplying the east coast with necessary products and at the same time keeping supplies flowing to the new front in Africa.

The meeting followed by only a short time the announcement of the opening of the African campaign, and it was estimated by the Council's committee on economics that there would be a shortage of 100,000 barrels per day in east coast transportation facilities, since tankers heretofore serving the east coast will undoubtedly be put in the United States-Africa run.



Ralph K. Davies
spoke at API meeting

The only light in the situation is found in the planned extension of the "big-inch" pipeline from the Mid-Continent and Texas fields to the Atlantic Coast, but this relief cannot be expected for the next five months, when the line is scheduled to be completed.

In connection with the impending shortage, Coordinator Ickes has appealed to all consumers on the Eastern Seaboard to further reduce their use of products, and the gasoline value of the coupons now in use in the Atlantic states have been reduced to three gallons from four.

Subsidy Opposed

The council took action against current suggestions of the Office of Price Administration by passing a strong resolution opposing Federal subsidization of exploratory drilling. The resolution stated that a subsidy method would be fallacious, inadequate, capricious, impossible to administer fairly and practically, costly to the government and the public, and inconsistent with the American way.

Rather than a subsidy plan, the PIWC urged establishment of fair and adequate prices for crude oil, the continuation of the percentage depletion allowance, and the continuation of the right to charge intangible development costs to expense. The council said that this method of encouraging exploration resulted in more scientific development and more efficient production methods. Coordinator Ickes was requested by the resolution to make the feelings of the industry known to other governmental agencies and to do all that he could to prevent establishment of a subsidy program.

Refinery Problem

Describing a situation directly applicable to California, the PIWC economics committee reported that the nationwide gasoline rationing program "brings to a sharp focus the impending radical decline in total motor-fuel consumption throughout the country west of the Alleghenies. The reduction expected is calculated at 13% compared with recent demand which has already reflected the effect of voluntary conservation. This reduction will be superimposed upon a situation in which demands for the other products are pressing upward. This situation obviously calls for a pattern of refinery output entirely different from that heretofore prevailing and applies to all areas in which rationing has not previously been in effect."

Inference by the committee was that refineries producing war materials should be considered in a separate operating category, the point being made that production of gasoline could not be materially reduced in refineries manufacturing butadiene, toluene and aviation-grade gasoline components.

General Heading: BAKER GUIDING, FLOATING, CEMENTING EQUIPMENT

Unit No. A-15

Subject: How To Do That Shoe Job Successfully The *First Time*

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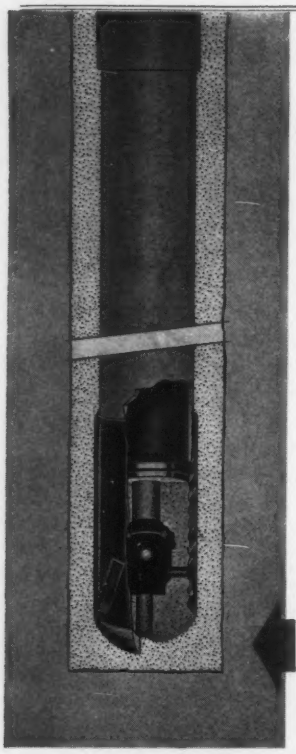
Export Sales Office:
19 Rector Street, New York, N. Y.

Index: 250.1
Date: November 20, 1942
Page: 1 of 1 p.



DO THAT SHOE JOB THE *FIRST TIME* WITH A . . .

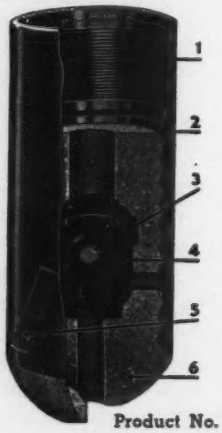
Under today's conditions, the securing of a successful first-time cement job is more than just "important" . . . ***it is vital!*** We can't afford to lose the additional man hours, rig time and materials required for a "second-time" job. They are needed to drill and cement a second well—not for second-time use on the same well.

Baker's contribution to this war-time problem, is making available cementing devices which afford every possible opportunity for securing successful results the ***first time.***

An outstanding example of such a device is the *Baker Cement Wash-Down Whirler Float Shoe (usually used in combination with a Baker Cement Float Collar). This Shoe not only assures safe and proper landing of the casing, but through its efficient "whirler action" provides best possible chance for complete encasement of the pipe with a uniform body of cement, with the hazard of channeling reduced to a minimum. In addition, when the cement job is completed, the internal construction of the Baker Cement Wash-Down Whirler Float Shoe can quickly and easily be drilled out leaving no harmful fragments in the hole to interfere with further deepening operations.

For complete details concerning the Baker Cement Wash-Down Whirler Float Shoe and other efficient Baker Guiding, Floating and Cementing units, see pages 227-241 of the 1942 Baker or Composite Catalog.

★BAKER CEMENT WASH-DOWN WHIRLER FLOAT SHOE



Product No. 120

*Baker Cement Wash-Down Whirler *Float Shoe. (*The Baker Wash-Down Whirler principle is also available in a Guide Shoe.)*

IMPORTANT FEATURES:

(1) THREADED CONNECTION FURNISHED TO FIT ANY TYPE CASING. Baker Floating Units can be furnished with threaded connection to fit the specifications of your casing. (Float collars can be furnished with both "double female" and "male and female" threaded connections. Manufacturing precision assures thread uniformity and accuracy.

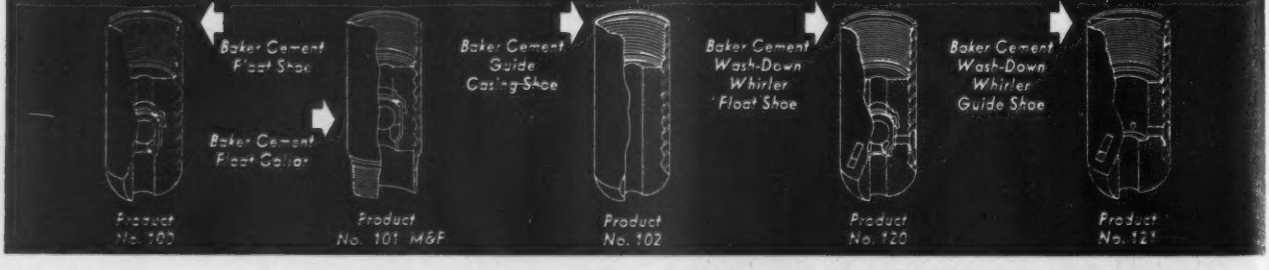
(2) STRENGTH. The seamless steel casing shoe into which the concrete plug and Plastic BALL-TYPE Valve Assembly are securely anchored, provides a unit that has the STRENGTH to float the longest and heaviest string of casing with an ample factor of SAFETY.

(3) POSITIVE, LEAK-PROOF BACK-PRESSURE VALVE. The buoyant Plastic BALL-TYPE Back-Pressure Valve floats in the cement slurry or rotary mud and instantly forms a leak-proof double seal against a narrow, tough rubber ring (backed by Plastic and concrete) at the slightest reversal of pressure. Here is Valve Efficiency at its best.

(4) AMPLE CIRCULATION AREAS. The correctly designed, streamlined Valve Assembly provides passageways ample for any circulating or cementing operation . . . a fact attested to by actual field performance under the most severe operating conditions.

(5) BAFFLED WHIRLER PORTS provide wash-down whirler action so important in washing away bridges, preparing formation to receive the slurry, and securing uniform cement distribution. Here is the ultimate in Cementing Efficiency.

(6) EASY DRILLABILITY results from the internal construction of Baker Formula Concrete and Plastic . . . the Plastic BALL-TYPE Valve Assembly being set on end in the concrete plug to present a minimum cross-sectional area to the drilling bit. The concrete and the Plastic are quickly drilled up and circulated out of the hole.


Baker Cement Float Shoe
Baker Cement Float Collar
Product No. 103
Product No. 101 M&F
Baker Cement Guide Casing Shoe
Product No. 102
Baker Cement Wash-Down Whirler Float Shoe
Product No. 120
Baker Cement Wash-Down Whirler Guide Shoe
Product No. 121

Joint Use Committee

A Subcommittee on Joint Use of Facilities for the production division of the oil industry has been appointed in District No. 5. L. L. Aubert is chairman of the committee, committeemen being notified of their appointment by E. E. Pyles, Chairman of the District No. 5 Production Committee, at the request of Wm. F. Humphrey, Chairman of the General Committee for District No. 5.

Purpose of the committee is to work out means by which material and manpower can be conserved by the oil industry in view of present and prospective shortages of both.

The committee pointed out that the "adjustment in refinery yields necessary to support a balanced program is complicated by the necessity of maintaining full production of war products which require certain levels of crude runs and gasoline manufacture."

Members were nominated by the district General Committee at the request of Deputy Coordinator R. K. Davies. In his letter requesting such nominations, Mr. Davies outlined reasons for his request and the purposes to be served by the committees, saying:

Purposes of Committees

"The large opportunities for economy in the employment of labor and in the use of materials in the oil industry lie in the direction of the joint use of physical facilities. The duplication of plant and of operation which had its full justification in normal times can scarcely be continued in the face of the ever more critical war demand for men and material. The war standard demands a maximum production with a minimum expenditure which can only be accomplished with a suspension of the customary relationships in favor of plans for the joint use and sharing of facilities by the various separate units of the industry.

"In harmony with the foregoing I ask that you nominate at once the membership of Subcommittees for the Joint Use of Facilities, in production, transportation, refining, marketing, and natural gas and natural gasoline. These committees, when appointed, will devote themselves to the study of industry operations from the standpoint herein described and to the development of plans calculated to achieve the purposes herein set forth.

Seeks Typical Examples

"Immediately these committees are formed, I ask that they select as typical examples certain representative situations in their respective jurisdictions and make quickly an appraisal of the possibilities thereof, reporting promptly upon this experience. We are anxious to have sufficient tangible evidences from all branches of the industry over the country as soon as we can to enable us to appraise, in at least a rough way, what may be expected finally from this movement."

No Rules Yet

In asking that the members of the subcommittee be notified of their appointment, Mr. Humphrey said:

"As yet no rules or regulations or specific definition of duties or responsibilities have been issued but in anticipation thereof the subcommittee is expected to survey all the facilities in the Production Division in District Five for the purpose of formulating a plan for the efficient joint use of such facilities by the companies operating in District Five with the final objective of increasing the industry's service to the Armed forces of the United Nations while complying with the restrictions imposed on industry operations by Wartime economy. It is anticipated that such advance survey will provide a plan whereby the industry would speedily and efficiently discharge whatever responsibilities may be imposed on it by the rules and regulations when issued."

D. R. Knowlton
spoke at API meeting

Committee Members

In addition to Mr. Aubert, who is President of the Bankline Oil Company, other members of the production division subcommittee on Joint Use of Facilities for District No. 5 are: H. T. Wyatt, Production Manager, Shell Oil Company; F. S. Bryant, Assistant to the President, Standard Oil Company; A. C. Rubel, Vice-president, Union Oil Company; L. C. Decius, Vice-president, Tide Water Associated Oil Company; B. E. Parsons, Vice-president, General Petroleum Corporation; W. M. Keck, Jr., Vice-president, Superior Oil Company; Ross McCollum, President, National Oil Company; R. D. Montgomery, Manager of Exploitation, Richfield Oil Corporation.

Materials Group Named

Appointment of a materials subcommittee for the General Committee of District No. 5 has also been announced, and while the functions of this committee have not yet been definitely outlined, its organization is a part of the program, now being stressed by the OPC, to secure full utilization of men and materials in the oil industry.

General discussion in the Petroleum Industry War Council of the functions that these committees might perform has included the inventorying of such materials as might be in the hands of oil and sup-

ply companies in the various districts; the allocation of that material; and the maintenance of such records, as well as the actual administration, that such a materials pooling program would require.

Members of the materials subcommittee are: E. W. Beck, chairman, General Petroleum Corp.; Phillip Hauck, The Texas Co.; Lyman Waters, Standard Oil Co.; E. H. Weaver, Union Oil Co.; H. H. Kelley, Richfield Oil Corp.; Sydney Covell, Shell Oil Co.; A. P. MacKillop, Tide Water Associated Oil Co.; Dana Hogan, Hogan Petroleum Co.; Maurice A. Machris, Wilshire Oil Co.; J. 'A. Crawford, Youngstown Steel Products Co.; Harold Howard, Howard Supply Co. Major company representatives on the committee are purchasing agents of their respective companies.

Tubular Goods Inventory

In connection with pooling of materials, the OPC has mailed to each operator in each of the districts in the nation a questionnaire on which it is mandatory for the operator to list, by size, type, and weight, all tubular goods in his possession, together with a statement of how much of each he used during the third quarter of the current year.

This inventorying of tubular goods by the OPC has no apparent connection with the formation of materials subcommittees in the various districts, but a definite program for pooling of all industry facilities is being undertaken. In another column of this issue, the formulation of a subcommittee for the joint use of facilities in the production division of the industry is described, together with the background leading up to the creation of such committees. It is understood that each division of the industry will have a comparable subcommittee, that the chairmen of these subcommittees will form a coordinating "committee on joint use" for the district, and that the whole program looks toward the sharing of facilities, materials, and manpower by the oil industry to the greatest extent possible.

The OPC has been urging such joint use for a number of months, and the subject has been under discussion by the Petroleum Industry War Council several times. Most recent boost to the program was given by both Coordinator Ickes and Deputy Coordinator Davies in speeches made before the A. P. I. at its meeting in Chicago this month.

L. L. Aubert
Chairman Joint Use Committee

Law Covers Contractors

The Supreme Court, in a decision in the case of Warren-Bradshaw Drilling Co., has held that employees of a drilling contractor are under the wages and hours law (Fair Labor Standards Act).

The court held that employees of the company were entitled to pay at the rate of time and one-half that actually received for all work in excess of 40 hours per week. It was shown that the employees had been paid at the rate of $11 per day for seven days a week, eight hours per day, until the well had been completed, and that such rates were sufficient to provide a basic wage scale and time and one-half for overtime.

The majority opinion was that the work of drilling an oil well was production for interstate commerce, since oil produced from the well went into pipelines which were connected with oil companies operating on a national scale, and that therefore some of the oil found its way into interstate commerce.

The decision was seven to one, Justice Roberts dissenting. In his dissent, Justice Roberts said that under the logic in the majority opinion, the man who mined the iron ore that went into the tools used was also under the act, then saying that in his opinion, "Congress could not and did not intend to exert its granted power over interstate commerce upon what in practice and common understanding is a purely local activity, on the pretext that everything everybody does is a contributing cause to the existence of commerce between the states, and in that sense necessary to its existence."

E. W. Beck
Chairman Materials Committee

Natural Gas Problems

Listing the problems of the natural gas and natural gasoline industries resulting from the war, E. Holley Poe, director of the OPC natural gas and natural gasoline division, devoted considerable time to the situation in California, in a paper read at the A. P. I. meeting.

General problems, Mr. Poe said, include:

"1. Increased demands by both war industries and private industries as well as the normal increase of about 12% in civilian usage.

"2. Lack of materials to expand facilities in keeping with these increasing demands.

"3. Increasing shortage of manpower brought about by enlistments, induction into the armed forces and migration of workers to other war industries.

"4. Increased expenses resulting from the rising cost of labor, materials, and operating supplies.

"5. The heavy tax burden, present and prospective, in the view of expenditure of tremendous sums of money in order to supply demands of the war effort.

"6. Ascertaining the expected requirements of natural gas, natural gasoline and related hydrocarbons by all phases of the war effort in time to provide for them.

"7. The need for relief during the war period from express or implied covenants contained in leases by reason of limited supplies of critical materials which prevent the orderly drilling of wells on such leases."

California Problems Unique

Mr. Poe characterized California as having many unusual problems, because the state's natural gas production is predominantly casinghead, resulting in large gas production as an accompaniment of increasing oil production. He described the development of the Playa del Rey area as a storage reservoir with a capacity of 3 billion cubic feet, of which one billion will remain in the formation as a pressure backlog, with two billion in use as storage.

California Developments

He listed major developments in the California natural gas industry during the year as:

"1. The conversion of the Stanpac line from a gas line to an oil pipe line and the subsequent rearrangement and addition of natural-gas facilities to handle additional gas from the Rio Vista gas field to the San Francisco area.

"2. The general increase in crude oil production and particularly the shifting to more low-gravity crude at low gas-oil ratios to get greater fuel-oil yields. This program nenessitated some changes in gasoline plant facilities and gas-handling facilities.

"3. The increased demand for isobutane was met by full cooperation of gasoline plant operators in increasing their plant efficiencies and providing facilities for maximum recovery of isobutane. Our last report indicates about 97% of isobutane is being delivered to manufacturers of 100 octane.

"4. To conserve all gas production, a gas conservation committee under the direction of the production committee and assisted by the natural gas and natural gasoline committee, has produced most excellent results. The investigation made every operator conscious of the problem, and by voluntary cooperation, practically all of the existing situations have been or will shortly be corrected.

"5. Through the cooperation of the production committee, with the natural gas and natural gasoline division, the production of natural gas is being regulated to meet the gas demands. The fact that only two fuels are generally available in California; namely, fuel oil and natural gas, presents an immediate problem due to the need for accumulating maximum stocks of fuel oil for war purposes. This requires that the maximum fuel need of industry in the district be met with natural gas and requires the maximum production of casinghead gas to meet the requirements in Southern California."

Conservation Vital

Mr. Poe concluded by saying that "Conservation is the biggest word in the supply phase of the war effort. Likewise, when we talk about the conservation of oil and gas we are talking about the life span of the oil and gas industry. When we deal with it we are dealing with the industrial future of the nation and with the health, comfort and future of our citizens.

"Conservation of natural gas reserves and conservation in the production, transmission, and utilization of natural gas must be faced positively by all of us. Sound policies must be encouraged and sound laws and their proper enforcement be sincerely advocated. The importance of proper utilization of gas produced with oil calls for continued support of studies designed to permit the proper use, in an orderly manner, of the gas produced with oil, which heretofore has been blown in the air and wasted.

"The war emergency will cause many dislocations in our operations, but on the credit side dire necessity will teach us much about better production methods, better transportation and distribution methods, better ways and means not only of conserving the product but of preventing the economic dissipation of it."

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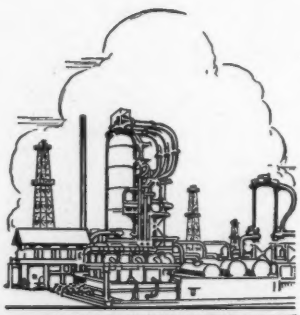
•

In every national emergency during the past century, Worthington has furnished important equipment for the American Naval and Military Forces and for the services which support their action. It is a great satisfaction therefore to know that, in this struggle, our efforts include a big part in delivering the petroleum products which give life to our machines of war.



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Steel Allocation Problems In the Oil Industry

By Alexander Macdonald
Deputy Regional Director
Los Angeles Area, War Production Board

When a few weeks ago your president did me the honor of inviting me to speak before your Association, I promptly accepted. Knowing that you are a representative group of business men and that you are all anxious to do your full part in the war effort, I welcome the opportunity of appearing before you and giving you a brief description of the War Production Board's functions and activities in the allocation of steel in so far as they are applicable to your industry.

In the haste of converting the country from a peacetime economy to one of war, a certain amount of confusion has been inevitable. It seems to me that one of the first tasks of anyone representing the War Production Board is to do all he can wherever and whenever he can to dispel this confusion. Therefore, if by what I have to say this afternoon I am able to set you right upon any point concerning which you are perplexed, I shall feel that my remarks have served their purpose.

The title of this paper was conceived some weeks ago. As I now view it, this title is somewhat misleading because it implies that there are various steel allocation problems in the oil industry. In truth there is only one; but it is a huge one. It can be stated realistically by posing the following question: How can the oil industry do its job to the best advantage to the war effort with a supply of steel which is inadequate judged by peacetime practices? Let me elaborate.

First of all everyone must realize that there is not enough steel for all of our purposes. There is not even enough to provide currently all of the ships, tanks, guns and planes that our armed forces would like to have. The steel available for strictly civilian use is negligible—almost non-existent. We have reached the point in our war economy where the paramount rule in the distribution of raw materials is: First things come first. The progress of the war —which in the last analysis must govern the strategic policy of our high command—is not clearly predictable. We have military fronts

Alexander Macdonald

all over the globe, and it is the developments on one or more of these fronts that dictate the preference which must be given to one type of military equipment over another. I would like to point out that these preferences by the very nature of things are not fixed. They change from time to time. I do not profess to know where the emphasis lies at the present time—that is a military secret. I do know, however, that this emphasis has changed during the course of our war effort, and we must assume that it will change again.

Aside from the fact that our most critical needs may change, for example, from tanks to ships, from battleships to carriers, from cargo ships to cargo planes, or vice versa, we also face changes in production schedules caused by the ingenuity and inventive capacity of the human mind. This war is not only a battle of quantitative production, it is also a contest as to quality; that is to say, as to the efficiency of the weapons produced. If either we or the enemy expend materials and labor in the production of an outmoded implement of war, those materials and that labor are in a sense wasted. Let me give you an example. If we can take as gospel the statements currently found in our press to the effect that our Flying Fortresses are extremely efficient fighters as well as bombers and that they do not need fighter protection, it can be argued with some force that we can profitably cut down our production of escort planes and channel the raw materials saved thereby into other war products. This continuing struggle to best the enemy in the effectiveness of the end products of war is a vital one. Nevertheless it inevitably involves the dislocation of production schedules, and such dislocation in turn has the effect of further complicating and restraining the free and uninterrupted flow of materials.

Having attempted to give you an overall picture of the scarcity of materials and of some of the factors that unavoidably make for such scarcity, let me make it clear that all industries are affected. Even those companies that make airplanes, ships, tanks and guns are having their requests for materials cut down. Literally no one is getting all of the materials he asks for. There are approximately two hundred and thirty-two major industries in this country, and the statement I have made applies to all of them. I have no statistics to present to you to show the treatment the oil industry is getting with respect to materials in comparison with other industries. Even if I had such figures they would not tell the whole story because neither you nor I are capable

of knowing the relative necessity of the various products presently being manufactured from the standpoint of the war effort. I venture the assertion that the oil industry is not being dealt with unfairly.

Let me emphasize that the War Production Board's conception of the priorities system or of the allocation of materials is based solely upon what end products are to be created by the materials. A gallon of gasoline isn't judged by its monetary worth but only by the critical materials required to produce it and the relative necessity for gasoline in the war effort. I think you can be certain that if we should ever conceivably come to a point where the production of more gasoline was of greater necessity than, for example, the production of more tanks, you would find that the War Production Board would be more liberal in allowing materials to the manufacturers of gasoline than to the companies that make tanks.

You have no doubt read in the press this week of the coming into being of the so-called Controlled Materials Plan. Last Tuesday I received a telegram from our Washington office describing this plan in some detail. Although the plan does not purport to apply to the petroleum industry, I believe that it will be of interest to you because it will certainly indirectly affect the producers of gasoline. The telegram reads as follows:

"America's war economy has been further streamlined with the introduction by the War Production Board of the Controlled Materials Plan, establishing a long-range program controlling the flow of critical materials into war production. The oil industry, however, is not immediately affected, and for the moment at least will continue doing business as at present. Evolved from existing distribution systems and from experience gained through these operations, the CMP has the approval of all government agencies concerned. It was drafted after lengthy conferences with the Army, Navy, Maritime Commission and Office of Civilian Supply, as well as representative consumers and producers of materials. Main purpose of the plan is to make certain that production schedules are adjusted within materials supply so that production requirements are met. This will be accomplished in two ways: one, requirements for critical materials will be adjusted to the supply; two, the quantity and type of materials needed will be made available at the time required to meet approved programs. Allotments of critical materials will be made through seven claimant agencies such as Army, Navy, Office of Civilian Supply, etc., to prime contractors producing essential goods. Prime contractors in turn will divide the allotments with their subcontractors and suppliers. Each manufacturer receiving an authorized order or authorized delivery schedule for his product will receive an allotment of materials which he and his subcontractor must buy so that they may fill the order. Such allotments are obtained by manufacturers from the government agencies to whom products are sold, or from the appropriate industry branch of WPB for certain classes of products as listed in the plan. The "controlled materials" which will initially be alloted under the plan are steel, copper, and aluminum. The "claimant agencies" to which the initial allotments will be made are the Army, Navy, Maritime Commission, Aircraft Scheduling Unit, Office of Lend-Lease Administration, Board of Economic Warfare, and Office of Civilian Supply. The Requirements Committee is to make the initial allotments to claimant agencies February 1, 1943, covering deliveries of materials to industry for the second quarter of 1943. When the plan is fully in effect, the mills producing controlled materials will not be allowed to fill orders except against allotments made under plan. During the transition period (until July 1, 1943), the preference rating system will take care of those manufacturers who do not receive their allotments in time, but allotments for a given month will be filled ahead of other orders bearing preference ratings. Separate provisions for construction and repair and maintenance are set forth in the plan. Preference ratings will also govern materials other than controlled materials and resolve conflicts in the production and delivery of manufactured items. Such improvements in control must come through a carefully developed transition from existing methods. The new plan is designed with this necessity in mind. The transition will be accomplished by gradually substituting the new plan for the present controls in an orderly manner and without disruption of production. This method of distributing materials is in effect 'vertical allotment' so far as controlled materials are concerned. It will gradually replace the present priority system, including the Production Requirements Plan, which is on a horizontal basis."

You will observe that this telegram states the oil industry is not immediately affected. The reason is that that industry is already being dealt with substantially on an allocations basis. In other words, the Controlled Materials Plan is nothing more or less than the application to all industries of the present allocation system in effect with respect to the oil industry. Notwithstanding this plan will not presently affect the oil industry directly, it is bound to affect it indirectly, because it will be applied to the manufacture of pumps, engines, heat exchangers, instruments and other appliances used in the natural gasoline industry. If you are wise, therefore, you will attempt to anticipate your needs of these items well in advance because under what might be called a scheme of rationing raw materials to industry, you will no longer be able to do as you did in times of peace; namely, pick up the telephone and order a pump when you decide that you want it.

Now let us return to our subject, the industry's steel allocation problem. In these troublous times I strongly believe in the wisdom of frankly facing the difficulties with which we have to contend. I think we must accept the premise, therefore, that the oil industry will be

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unable to obtain all of the steel that it needs. It will obtain more steel than some industries and less than others, but you can be sure that there will not be enough for the industry to do all that it would like to do and all that it has been accustomed to do in times of peace.

Once this unpleasant fact has been accepted, it is obvious that the efforts of the industry to get along as best it can with what it has should be redoubled. I have the following specific suggestions to make to you:

(a) If the petroleum industry is only to be accorded half a loaf, be sure that it takes full precaution to see that it gets the full half loaf. In order to accomplish this, it is necessary to follow the procedure laid down by the OPC carefully and intelligently. I am sure that you all understand this procedure in a general way. Donald Nelson has delegated authority to the Office of Petroleum Coordinator to process all applications for relief by oil companies up to the point where War Production Board authority is required. These applications are divided into two classes: first, those seeking an exception from Order M-68 and its amendments; and secondly, applications for priority assistance under Order P-98-b. I am informed that the delay in or the denial of these applications in a number of instances is caused by the fact that the applicant has not stated his case as fully or as favorably as the facts warrant. Bear in mind that the office of the OPC in Washington that processes these applications initially can only be guided by what appears in the forms you make out and submit. Consequently if an applicant fails to state his case as fully or as favorably as he is entitled to state it, it is to be expected that he will not receive the consideration that he otherwise would get. Therefore, my first suggestion to you is to take the utmost care in the preparation of these applications. Fortunately you have an able office of the OPC in Los Angeles and I am sure that the members of that office will be willing to consult with you and aid you as to any questions that may arise in the preparation of the OPC papers.

(b) Next I suggest that you utilize all of the brains in your organizations to devise ways and means of operating with a minimum amount of steel. I am not implying that you are not already very much alive to this problem and that you are not working on it. I know that you are. But I urge that you give this problem the very best you have. In the War Production Board office in Los Angeles I am continually witnessing the exercise of such ingenuity by all kinds of manufacturers and further proof of the old adage that necessity is the mother of invention. In an economy which faces a shortage of materials, the ability which manufacturers are showing in finding non-critical substitutes for critical items is inspiring and speaks strongly for the resourcefulness for which American industry is famous. To the extent that you gentlemen of the petroleum industry utilize your initiative in the saving of critical materials in your operations, to that extent you will not only aid yourselves but at the same time you will render a most valuable contribution to the overall war effort.

(c) My third suggestion is negative in character, but it is nevertheless important. It is the order of the day for industry and government to complain of each other. That is a natural American trait. If we don't like the way the other fellow is doing something, it is second nature for us to complain about it. I still think that we should criticize fully and freely, but with one important qualification, and that is, such criticism should never be destructive in character. In other words, I ask you not to be critical of the OPC, the War Production Board, or any other of the war agencies unless you have a constructive suggestion to make. My office welcomes such suggestions because they tend to show us how we can do our job better. The other kind of complaint does no one any good, that is to say, no one except Messrs. Hitler, Tojo and Mussolini.

Everyone should realize that none of the government war agencies are perfect either from the standpoint of organization or personnel. They couldn't be perfect. They were put together hurriedly to meet the emergency, and enterprises that normally would require years of study before they were created have blossomed into being overnight. This condition is unfortunate, but unavoidable. We Americans are just that kind of people; we have to learn how to fight our wars while we are fighting them. I believe, therefore, that if each of us, whether we be acting for government or for industry, will limit ourselves to complaints that are constructive in their nature we will be helping ourselves and our country. To the extent that we fail, we are helping the enemy. I also believe that most of us can find ways and means of doing our own jobs more efficiently; and this observation applies not only to industry but to government. Perhaps if each of us concentrates on eliminating the shortcomings in his own work he won't find much time to devote to carping at the performance of others.

Delivered at the CNGA Fall Meeting

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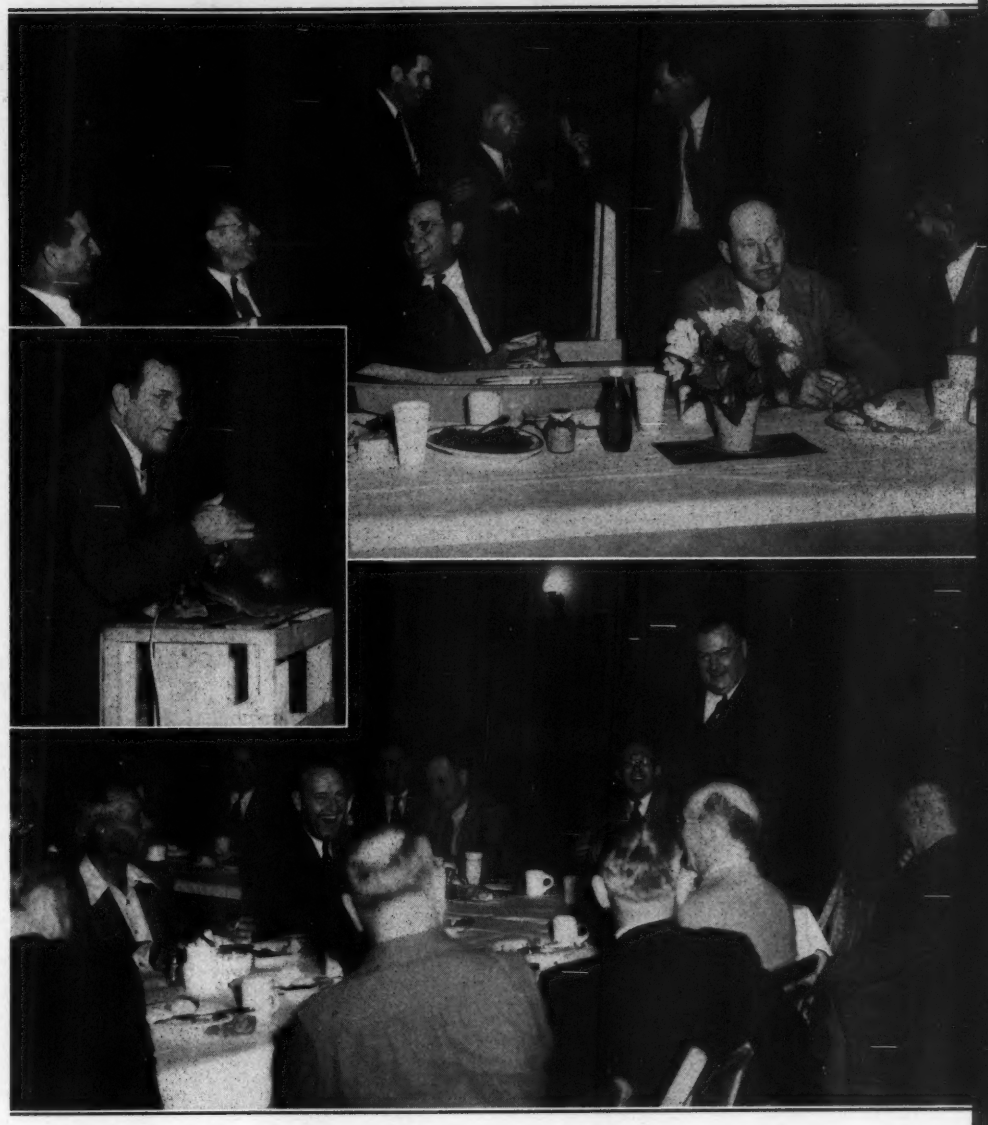
Shell Associates Honor Kightlinger



Honoring Frank J. Kightlinger, drilling foreman in Los Angeles Basin production division, who retired at the age of 60 after nearly 24 years with Shell, fellow workers gave a farewell dinner last month in Shell Recreation Hall in Long Beach. Inset: Frank was presented with various gifts, one of them being a dog, as a reminder of the time he was bitten two decades ago. He named the pooch Joe Shell. Above, seated: Harold T. Wyatt, Walter Elliott, Kightlinger, William E. Feistner, Samuel F. Bowlby. Standing: Ross B. Chambers, Homer A. Dix (retired after 21 years' service), Matthew B. Schumacher. Below: Frank E. Rehm, manager, Head Office industrial relations and personnel, pictured during the story-telling round-robin.

Courtesy Shell News

R. H. McPeake Joins U.S.N.R.

R. H. McPeake, Sales Manager of the Export Division, Oil Well Supply Company, 30 Rockefeller Plaza, New York, N. Y., has been commissioned a lieutenant in the USNR and left New York at the end of October to assume his new duties.

During Mr. McPeake's tenure with the US Naval forces, the Manager of the Export Division, M. E. Nicklin, will be assisted by M. E. Keenan who was transferred from a Canadian District of the Company early this year.

Mr. McPeake is a graduate of the US Naval Academy, Class of 1930, and has been connected with the Oil Industry ever since his graduation. He has lived and traveled extensively in South America during his association with the Export Division of the Oil Well Supply Company.

Columbia Steel Announces Personnel Changes

The Columbia Steel Company announces the appointment of Mr. E. Barnett as Assistant General Manager of Sales in charge of Industrial Accounts. They also announce the appointment of T. A. Graham as Manager of Industrial Accounts, Los Angeles District.

The State Personnel Board announce an examination for Oil Gauger, entrance salary $165. Employment will be in the various oil-producing sections of the state and may include work at odd hours and at night.

Entrance requirements include three years of experience in petroleum production work with experience in oil gauging, sampling, or testing.

Applications must be filed by December 21, 1942. Applications and information regarding the examination may be obtained by calling at or writing to the State Personnel Board offices in Los Angeles, Sacramento, and San Francisco.

Oleum Refinery's Old Timer, "Mike" Del Monte (left center) gets off a good one to executive vice-president Bill Stewart, (right). Basil Hopper, Union's manager of manufacturing, is apparently a little ahead of the story, while Old Timer Frank Higuera from Oleum, who has probably heard it before, finds the camera more absorbing.

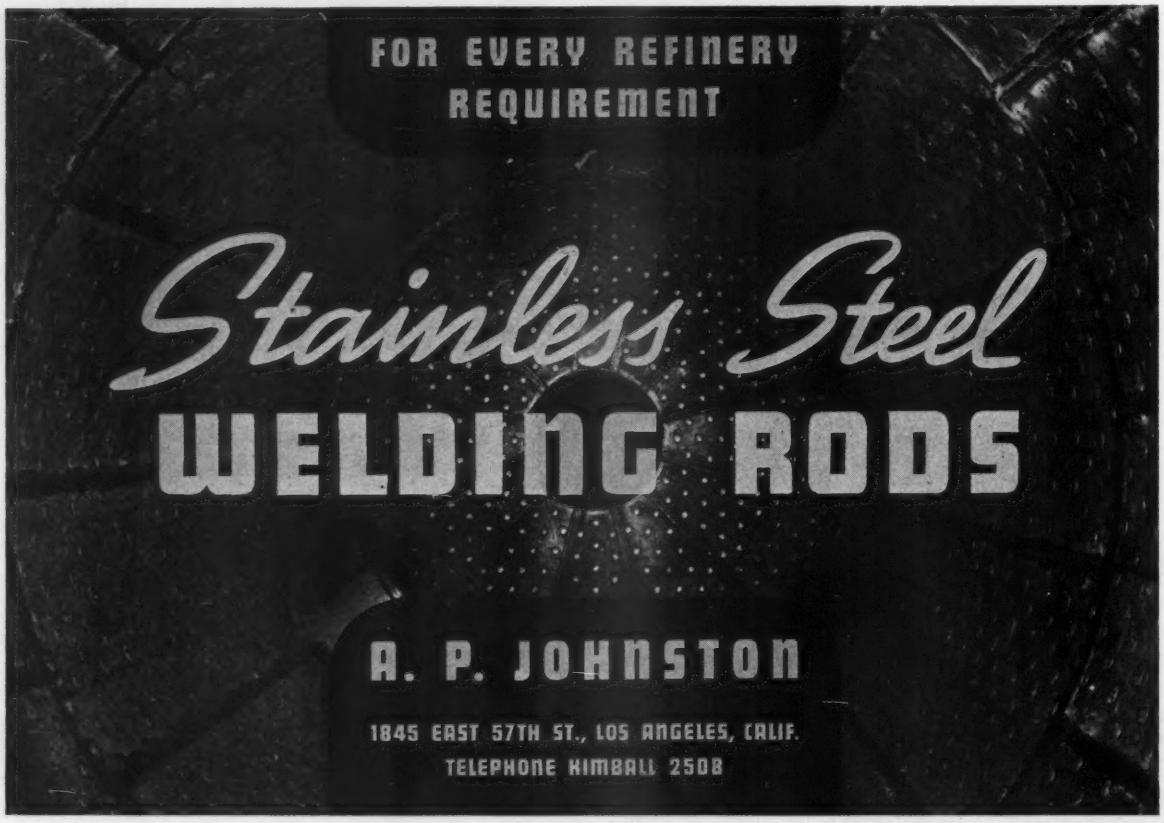
Union Oil Pays Tribute To Veteran Employees

Five veteran employees of Union Oil were paid special tribute last month at a banquet hosted by company executives at the California Club. The banquet was held in honor of the employees who have served the company for thirty-five years.

Acting as toastmaster for the group, Reese Taylor, president, presented each of the honor guests with an appropriately engraved gold watch as a token of the company's appreciation for faithful services rendered.

Michael Del Monte, pipe fitter at the Oleum refinery, boasted the longest service record in the group, having been continuously employed at Oleum since September, 1907.

Among the other "old timers" who were presented with watches were: Fred M. Woodward, Herbert W. Nickson, Frank M. Higuera and Hans Ehlers.



Blake Caldwell

Emsco Advances Blake Caldwell

Blake Caldwell has been advanced to the position of manager, in charge of all operations of the D + B Mid-Continent Division of the Emsco Derrick & Equipment Company, a post for which he is well qualified through experience gained in his former capacity as Chief Engineer of the D + B Division.

Mr. Caldwell was born in Gainsville, Texas, and is a graduate of the A & M College of Texas, receiving the Bachelor of Science Degree in Engineering in 1927, and a Master of Science Degree in 1929. He also has a three-year term as a member of the A & M faculty to his credit, as a teacher of chemistry and engineering drawing. His early training was acquired as assistant engineer for the Gulf Refining Company of Port Arthur, Texas, and as engineer for the Tulsa Boiler & Machinery Company of Tulsa, Okla. Prior to his first connection with Emsco in 1940, he was chief engineer of the Walter O'Bannon Company, Tulsa, for a period of nine years.

Mr. Caldwell's wide technical knowledge of oil field problems has gained for him the recognition as one of the foremost engineers of the country. While in Tulsa he was a charter member of the Tulsa Engineers' Club, and for the past ten years he has been actively engaged in API standardization work. At the present time, in addition to his regular duties, Mr. Caldwell is chairman of the Subcommittee of Rating Hoisting Tools, secretary of the Manufacturers' Subcommittee on Pumps, and a member of the Manufacturers' Subcommittee on Sucker Rods. He is also a member of the American Petroleum Institute.

Sperry-Sun Meets Conservation Requirements

An announcement of importance to the California oil industry is the very timely and very constructive stream-lining in connection with servicing companies that has just been announced by the Sperry-Sun Well Surveying Company.

The following release by Sperry-Sun Well Surveying Company is self-explanatory:

"To cooperate with our Government in the conservation of rubber and automotive equipment, we will, beginning November 1, arrange for regular schedules of service trips by our sales and service engineers in their respective territories, during which delivery and pick-up of rented instruments or equipment will be made by automobile. These schedules will be announced in advance.

Delivery and pick-up of rented instruments or equipment between regular service trips will be made by public carrier, unless the renter desires to call for the rented instrument or equipment at our nearest district office or return it to the same.

In order to give the most efficient service when making deliveries by public carrier, we will appreciate it if you will kindly fill out the enclosed Shipping Instructions for rented equipment, and mail the same promtly to the nearest district office. (Ask your local office for copy.)

In case of emergency requiring delivery by automobile, a charge of ten cents (10c) per mile for the total distance travelled by the service engineer will be made.

Wartime restrictions and difficulties in obtaining the necessary materials for the construction of replacement instruments and equipment make it necessary, more than ever, to conserve the life of the rented instrument and equipment. We have prepared an article entitled "Maximum Service From Well Surveying Equipment," which contains valuable suggestions regarding the proper use and the conservation of rented equipment. If you have not already received a copy, please apply for one at our nearest district office.

We appreciate your cooperation in our effort to comply with the wishes of our Government.

SPERRY-SUN WELL SURVEYING CO."

Barton Enters Armed Forces

Cecil Lee Barton, Petroleum Engineer with the Division of Oil & Gas since 1928, has been commissioned a captain in the Chemical Warfare Branch of the United States Army.

Presently being held in the Officers Replacement Pool at Edgewood Arsenal, Maryland, Capt. Barton writes that he is eager for immediate duty. Army life is not new to "Cece" since he served at Fort Monroe, Virginia, and with the Coast Artillery in the Hawaiian Islands during World War I.

Cecil Lee Barton

Capt. Barton received his B.S. Degree in Engineering from the University of California in 1928, his LL.B. in Law from Southwestern University in 1939 and was admitted to the California State Bar in 1940.

Concluding Abstracts of AIME Papers

Meeting of October 15-16, 1942

USE OF ELECTRODE SPACING IN WELL LOGGING, by R. H. Zinszer, Union Oil Company of California

Abstract

Application of electric logs has been used in correlation of subsurface structure to determine the size and shape of the oil reservoir. Such a knowledge is hardly complete until saturation and productiveness is determined for the various horizons. It is difficult to use electric logs successfully for this purpose because of the many factors that influence the curves. In this work an effort was made to establish an empirical correlation between formation resistivity for a series of electric log curves and water saturation and oil productivity of sand. Electric logs were obtained by recording with 10 different electrode spacings through the same interval of a well. In the analysis of these curves all factors except two, a dependent and independent variable, were held constant. The interval studied had been cored and a large number of samples were analyzed in the core laboratory in order to compare the values of permeability and saturation with the measured values of formation resistivity. Results of this analysis indicate first, the depth to which mud filtrate enters a sand body, second, correlation between permeability and sand resistivity for shallow penetration depths, and third, that the water saturation for an oil sand can be determined from the measured sand resistivity, after making suitable corrections for sand thickness. The procedure in the last method depends on a thickness factor correction and a theoretical curve. The accuracy of the theoretical curve is now being tested in the laboratory.

USE OF P.V.T. DATA IN FORMULATING THE PRODUCTION POLICY FOR AN OIL RESERVOIR by W. Tempelaar-Lietz, Shell Oil Company.

Available data indicate that there is a relationship between well spacing and ultimate oil recovery of such a nature that with closer spacing the oil recoveries are higher. Accordingly, to obtain the full benefit of any spacing it is necessary to maintain the pressures in each drainage area at an equal level in order to prevent movements of fluid from one area to the other.

It has been demonstrated that the withdrawal of equal subsurface volumes from unit sand volumes does not necessarily lead to the desired result and that the relative amount of gas present in the portion of the reservoir drained by the well has to be taken into account.

PRIMARY PRESSURE CONTROL: WILL IT INCREASE RECOVERY? by T. H. Acres, Richfield Oil Corporation

Any method of exploitation of an oil reservoir which considers reservoir pressure control in the early stages of its production history is intended to be included by the above title, "Primary Pressure Control." Much has been written and many arguments developed over the question of possible increases in recovery from initial reservoir pressure control. As far as the writer is concerned, there is doubt that the question will ever be satisfactorily answered, from a quantitative point of view, for the obvious reason that such an answer involves a comparison of the results of two methods of exploitation as applied to an individual reservoir, one estimated and the other actual. There will always be the criticism that the estimate may have been wrong. Probably the best proof that increases in recovery may be expected by a method of pressure control will come as indirect evidence from successful secondary recovery operations. That this is already the trend is indicated by thoughts of those who have done much investigating into this highly technical subject. Wyckoff (1) states: ". . . it is the obvious aim so to develop and operate a field that a maximum recovery at a minimum cost is obtained, and that there shall be no secondary recovery phase involving new expenditures that might have been eliminated had the proper prospective been possible at an earlier date." Also Norman E. Maxwell (2) says in speaking about the results of gas injection in Oklahoma: "A realization of the poor efficiency of recovery of the sand's oil content will stimulate the development of better methods, and after all, this is what gas injection is, and as such should be used as an ordinary tool of production during the critical life of the field and not wait until it is a secondary venture." The same thought has been expressed by Muskat (3) and others in writing of reservoir mechanics.

It has been attempted here to approach this problem from a theoretical point of view as well as from actual field results. There are a number of fields in which this principle of production is being applied, but from the point of view of recovery, the data are limited. The criticism mentioned above also applies, however there are some tangible results.

General Electric Issues New Bulletin on Arc-Welding

"Arc-welding Accessories" is the title of an attractive new 32-page bulletin (GEA-2704B) recently issued by the General Electric Company.

Profusely illustrated throughout, the bulletin presents a most complete line of General Electric accessories, all designed to make arc-welding safer and easier.

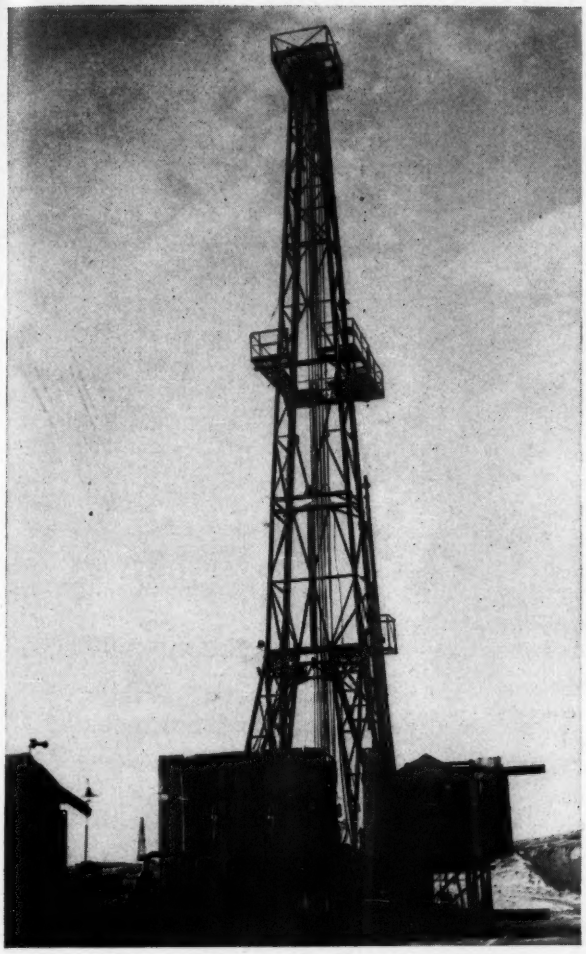
Among the listed items, which are completely specified and described in detail, are: goggles, observation shields, ventilated head protectors, chrome flame-proofed welding screens, ultraviolet-ray leather clothing, ultraviolet-ray protective paint, metal and carbon electrode holders, clamps, cable connectors, brushes, chippers, electrode carriers, and fillet-weld gages.

Also listed is General Electric's 200-page arc-welding manual. A price list and order blanks accompany the bulletin.

Engineering, Technology, latest news—twice a month in California Oil World.

This Little Rig Never Stays Home

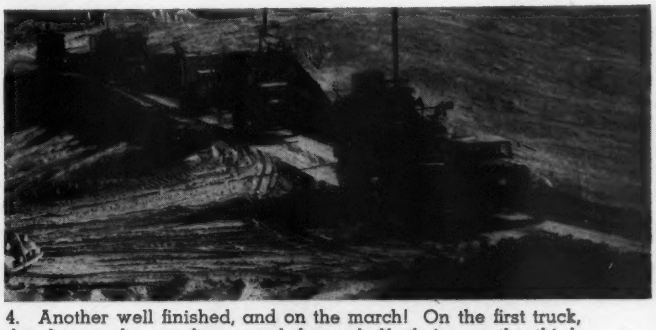
This "Little Rig" is a Standard of California portable, many of which are now in use for drilling shallow wells —to 4000 feet deep. It is easy to move. It saves about a week of man hours—and critical war materials on each well. It can be taken down, moved and set up again in 4 days. Only seven trucks and trailers are needed to move it.



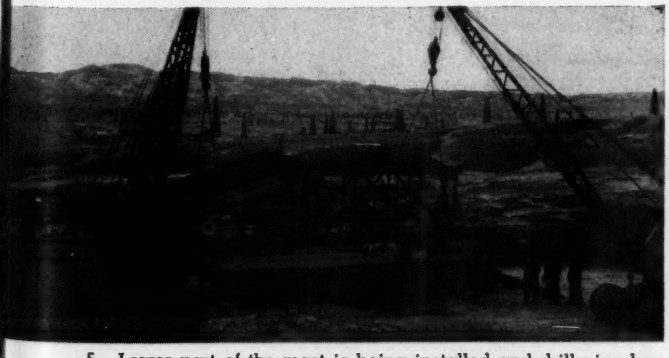
1. One of the new Standard of California portable rigs drilling a shallow well. To be technical, photo is from the drawworks side, showing slush pumps.

2. Two trucks pick up top half of the mast with crown block and working platforms attached, and carry them to new location. Only seven trucks and trailers are needed to move the entire outfit.

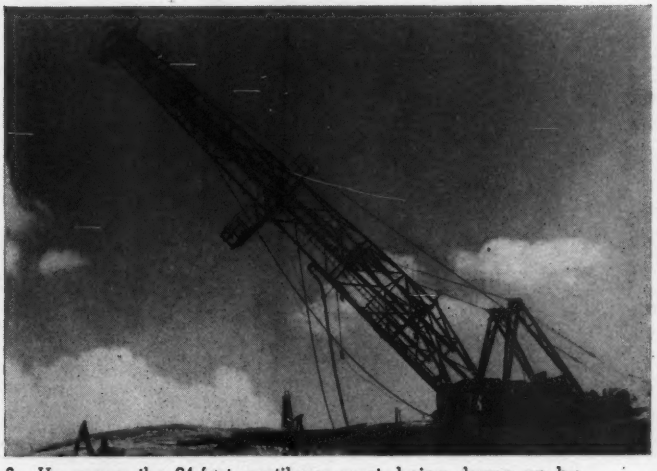
3. Heave ho! A foundation is lifted up to clear the well head. The polish rod is ready to be connected with the pumping unit as soon as the sub-base has been removed. Speed is the word!



4. Another well finished, and on the march! On the first truck, the drawworks; on the second, lower half of rig; on the third, the crane; on the fourth, top half of rig; on the fifth, foundation platform.

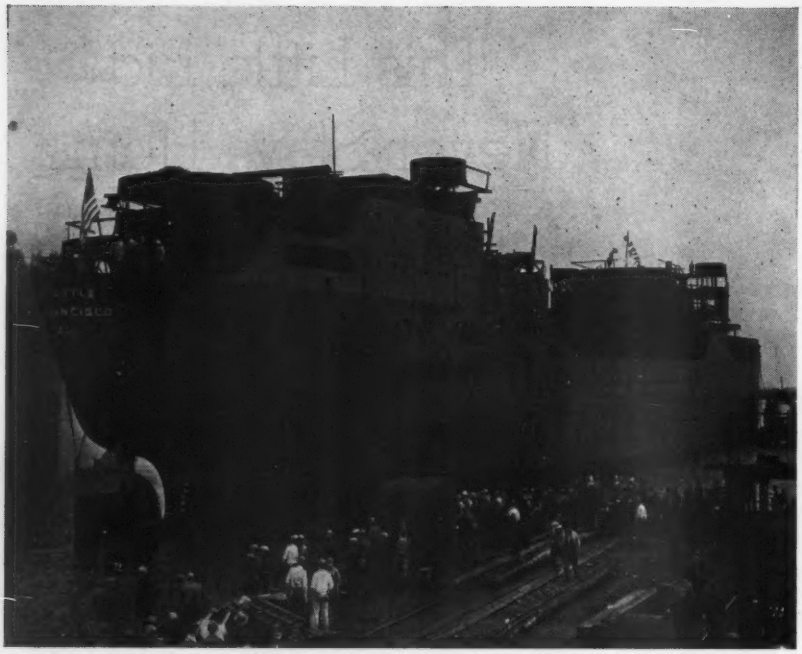


5. Lower part of the mast is being installed and drill pipe has already been laid out on stringers placed on the ground. Materials and man hours—about a week of these—are saved on each well.



6. Up comes the 94-foot cantilever mast, being drawn up by regular drilling line from the drawworks drum. Practically all connections have already been made to start the drilling of another well.

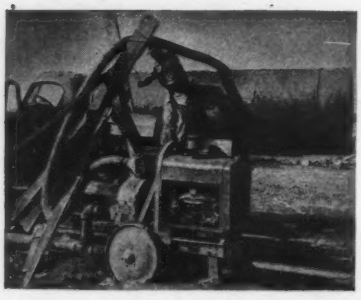
Courtesy Standard Oil Bulletin



Newest and largest Standard of California tanker "J. H. Tuttle", recently launched and now being prepared for active service in February.

Chain Belt Issues New Pump Catalog

The Chain Belt Co., Milwaukee, Wisc., have just issued a new folder which describes the type of work REX Speed Prime Pumps are doing in the oil fields and tells some of the important features of these pumps.



A REX Speed Prime Pump being used to transfer oil from storage to tank car.

Among the uses these pumps find in the oil fields are:

Supplying water to drilling.
Handling drilling mud from rig to rig and from storage to rig.
Transferring oil from storage to tank cars.
Lifting oil from gathering lines to separators.
Removing waste oil from under rig floors.
Dewatering fire wall trenches, etc.

REX Speed Prime Pumps are made in capacities ranging from 3000 to 125,000 G.P.H. All are portable and can be easily handled from rig to rig.

For further information concerning these pumps, Chain Belt Company publishes a catalog No. 400 which gives detailed construction information and other data concerning them.

SMITH-EMERY CO.
Since 1904
Oils Tested
Shipments Certified
Tanks Strapped
Offices and Laboratories
920 Santee St, Los Angeles
651 Howard St., San Francisco

R. S. MIESSE
OIL LANDS & OIL LEASES
1208 Subway Terminal Bldg
Los Angeles, California
Phone TUcker 7718

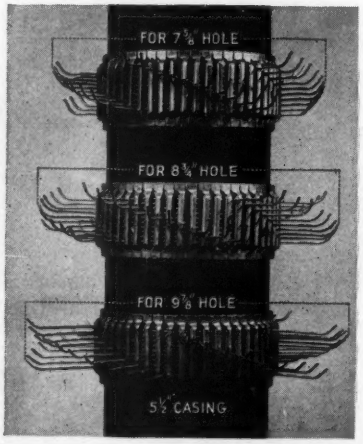
Standard of California Launches New Tanker

The largest ship ever built for Standard Oil Company of California —tanker "J. H. Tuttle"—has been launched at the Sun Shipbuilding & Drydock Company's yards at Chester, Pennsylvania, and will go into active service in February.

Mr. J. H. Tuttle, for whom the vessel was named was present when Mrs. Tuttle christened the ship in traditional manner. The tanker bears a name long identified with the petroleum industry of the Nation: Mr. Tuttle has served Standard of California in various capacities for many years and is now Vice-President and Treasurer on its Board of Directors.

New Cementing Guides For Various Clearances

Wall Cleaning Guides are now furnished by B & W, Inc. for various clearances between the casing and wall of the hole. Short, standard and long wire lengths now are available for such combinations as 5½-inch casing in 7⅝-inch, 8¾-inch, or 9⅞-inch hole. The outer wire diameter usually is 1½ inches to 2 inches



greater than the hole diameter, to provide centering by the torque spring action of the steel wires, and mud removal by scratching the face of the formation. Special wire lengths also are available for mud removal during open hole plugging or gravel packing operations.

THIS LAUGH

OFF!!

Drunk: "Let's give the bride a shower."

Other Drunk: "Thash a good idea. I'll bring the soap."

Co-ed: "I had a date with an absent-minded professor last night."

Girl Friend: "How do you know he's absent-minded?"

Co-ed: "Well, he must be. He gave me a D on my history test this morning."

He: "Pardon me, but is your dress slipping or am I seeing things?"

She: "Both."

He: "I'm not feeling myself tonight."

She: "You're telling me!"

"What did your wife say when you came in intoxicated last night?"

"Nothing. And I was going to have those front teeth pulled anyway."

"Marriage is no good. Jack stopped kissing me after the ceremony."

"He must be a poor husband."

"Oh, but Jack isn't my husband."

Senior: "Hurry over to our fraternity house, doctor; there's a fellow here who has something the matter with his eyes."

Doctor: "Must be serious if you wake me up at this time of night. What's the trouble? Does he see elephants and snakes and things?"

Senior: "No, sir; that's why I called. The room is full of them and he can't see any."

She: "I'll never go anywhere again with you as long as I live."

He: "Wh-why?"

She: "You asked Mrs. Smith how her husband was standing the heat, and he's been dead two months."

"My husband travels so much that each time he comes home he seems a perfect stranger."

Her friend: "How thrilling."

"Was he surprised when you said you wanted to marry his daughter?"

"Was he! The gun nearly fell out of his hands."

First Golfer: "Confound it, sir! You almost hit my wife!"

Second Golfer: "Sorry, sir. Here, take a shot at mine."

Auctioneer: "What am I offered for this beautiful bust of Robert Burns?"

Man in Crowd: "That ain't Burns — that's Shakespeare!"

Auctioneer: "Well, folks, the joke is on me. That shows what I know about the Bible."

Bill: "My father's a cop, but I'm no flop."

Alice: "My father's a baker, but I'm no Quaker."

Fred: "My father's a chauffeur, but I'm no loafer."

Helen: "Er — ah — my father's a surgeon."

Double Test

Visitor—"Don't you cut yourself pretty often with this straight-edge razor?"

Mountaineer—"Naw, I been shaving nigh on to five years now and I ain't cut myself neither time."

Some girls like a man who loves 'em and leaves 'em. Provided he leaves 'em enough.

Sheriff: "Say, young lady, there's no swimming here in this lake."

Beautiful: "Well, why didn't you tell me that before I got undressed?"

Sheriff: "Wal, there ain't no law agin' that."

College Professor: "Give me some of that prepared monoaceticacidester of salicylic acid."

Drug Clerk: "Do you mean aspirin, sir?"

College Professor: "Yes, that's it. I never can remember that name!"

Let's Analyze The Smoke!

JENSEN JACKS are made by the largest exclusive manufacturer of pumping equipment in the business. We didn't get that way by accident. Where there's smoke, there's fire. Could it be that producers are right? Could it be that JENSEN JACKS really are the most satisfactory units on the market?

It's worth investigation, don't you think? Particularly now.

California Representative

A. V. TURNER
445 W. 6th.
Downey, Calif.
Phone: Downey 47478

Stocked by

THE OIL TOOL CORPORATION
3075 Cherry Avenue
Long Beach, Calif.
Phone: 481-61

JENSEN

BROTHERS MFG. CO.
Coffeyville, Kansas, U.S.A.

EXPORT OFFICE: 50 Church St., New York City

Wartime Industrial Advertising Faces Huge Task

Under wartime conditions, more than ever, the job of industrial advertising is to get useful information from where it is to where it is needed quickly, efficiently and effectively. This was the message brought to members of Industrial Advertising Association of Southern California, a chapter of National Industrial Advertisers Association, at their November 14th meeting at the Los Angeles Ambassador Hotel by Schuyler Hopper, assistant executive vice president of Associated Business Papers.

At the speakers table, reading from left to right: R. Calvert Haws, Sam C. Eastman, Schuyler Hopper, John H. Kunkel, W. W. Mann, Paul Lady, J. Brewer Avery.

Speaking on the subject "How to Explain Wartime Advertising to Company Heads'" Hopper dealt with his subject not from the standpoint of explaining advertising in the sense of justification but in terms of showing management how necessary sound, well-conceived, informative industrial advertising is under present day conditions. Hopper pointed out that this is not the day nor the time for "we are the biggest, we are the best, we are the oldest" type of copy theme, and cited instead the fact that industrial advertising has a bigger job than that to do today.

He pointed out the fact that manufacturers of industrial equipment and supplies formerly had four principal channels for reaching customers with information concerning their products. These were sales and service departments, industrial exhibits, industrial clinics and advertising. Under war conditions sales and service departments, if not discontinued, are greatly curtailed in their activities, industrial clinics and industrial exhibits are out and thus industrial advertising remains as the sole means of disseminating technical and industrial information from the data files of manufacturers to their customers. On the other hand, the personnel of customers has expanded to a point where it is nearly four times normal size and many of those who make up personnel must be educated. Thus industrial advertising must not only take over for sales and service, industrial clinics and exhibits as well as its normal functions but it must do its job in a vastly enlarged field. Hopper, in his talk, backed up his points with exhibits of advertisements along this line from a large number of the nation's leading industrial advertisers. John H. Kunkel, president of the assocation, presided while Sam Eastman of Dozier Graham Eastman was chairman of the day.

General Electric Ships First Pipe-Line Motors Five Weeks Ahead of Schedule

General Electric recently shipped five weeks ahead of schedule, the first two of fifteen 1500-hp motors it is building for the new War Emergency Pipeline now being rushed to completion to help alleviate the oil shortage in the east. Production is now being expedited on the other motors, and the Company expects to beat the schedule dates on these as well.

Known to oil men as the "Big Inch" pipeline because of the 24-inch diameter pipe which makes it the largest oil trunk pipeline in the world, the new pipeline will extend 550 miles from Longview, Texas, to Norris City, Illinois. It will go into operation in December.

The 1500-hp motors will be used to drive centrifugal pumps in booster stations at spaced points along the pipeline. These pumps will keep 1,300,000 barrels of oil flowing at a rate of 4 miles per hour or a delivery rate of 300,000 barrels a day at Norris City.

The motors being built by General Electric use cast iron rather than steel plate construction to conserve steel. They also are of such a construction that the ventilating air from them is discharged through the top of the motor rather than through the side as in the conventional way. Through this arrangement, the heat of the motors is carried ceilingward toward a ventilating system which disposes of it when not needed to heat the pumping station.

FOR SALE—

No. 2500 Southwestern casing head plant. Complete unit 80 horsepower Bessemer compressor. J. Hokum Co., Phone HOllywood 3931.

WILLIAM L. WALDEN

Specializing on surveys for wild-cat oil locations
18619 Gault St., Reseda, Calif., Box 123. 11/20d

Field Development

Los Angeles Basin

Commonwealth Plans Puente Sand Trial

Commonwealth Oil Co. Billy Rowland No. 1, recently acquired by Barry Oil Co., Inc., is running casing to approximately 1220 ft. to test a 35-ft. zone which is reported to be largely sand of a permeable nature showing good cuts. Bottomed in shale and gray sand at 2098 ft. the well is located on sec. 14,2s-10w, immediately north of the highway west of the town of Puente. The company is reported assembling a full size rotary rig to drill another Puente well on a 200-acre parcel somewhat nearer the hills.

Southwest of here Flintkote Company is planning to drill a wildcat near the mouth of Turnbull Canyon. Tentative location is 2400 ft. north and 3000 ft. west of the southeast corner of sec. 12,2s-11w or one-half mile due north of the Axis Pet. Corp. Tandberg No. 1.

The Melvin Hansen well on sec. 24,2s-10w of the Puente Hills, is conditioning hole after recovering drill pipe stuck at 1051 ft. due to badly caving walls. Bottom is in coarse gray sand at 2651 ft.

Shell Oil Plans L. A. City Well

Shell Oil Co., Inc., is laying plans to move in a spark-plug outfit to prospect in the old Los Angeles City field area. Long considered a highly probable producing area the section has been the cherished target of many geologists and operators attention who were convinced that substantial oil production would be found when drilling permission could be obtained in the now metropolitan area.

The site for the well, Verne Community No. 1, is located 433 ft. south and 548 ft. west of the centerline of First Street produced and Gardner Street or approximately 1310 ft. south and 1900 ft. east of the southwest corner of sec. 21,1s-14w.

It is understood that current plans call for a conventional steel derrick to be sided in such a manner as to shield drilling lights as well as possible mud or oil spray from adjacent property installations.

On the west flank of Los Angeles City at Valley Blvd. and Soto Street, sec. 24,1s-13w, A. J. Rubenstein and Chris Schirm are reaming at 1250 ft. in the old Yellowstone Oil Co. Huntington-Seger No. 1. The 3919 ft. hole was cleaned out to 1496 ft. and is now being prepared for an electric log run to determine the possibilities of shallow production on a clearly defined anticline.

Aliso Canyon Well Produces

Tide Water Assoc. Oil Co.'s Fernando No. 1, sec. 27,3n-16w, is completed at 5325 ft. with a midweek gauge showing 400 bbls. of clean 21.2 gravity oil and 100,000 cu. ft. of gas through a 24/64-in bean. Porter No. 18 on section 28 of the field is drilling near 1000 ft. in hard shale.

The company's Sesnon No. 1, at the westerly field flank, which is directionally redrilling and deepening

LOS ANGELES BASIN WILDCATS

Area	Well	No.	Section	Depth	Status
Castaic	Young, Roy W., Inc., Walker	1	11, 5-16	9981	Idle
Del Valle	Union Oil Co. N. L. & F.	1	20, 4-17	5990	Drilling
Las Llajas	West'n Gulf Oil Co., Brady	1	13, 3-17	3510	Drilling
L. A. City	A. J. Rubenstein	H-S1	24, 1-13	3919	Reaming
	Shell Oil Co., Inc., Verne Comm.	1	21, 1-14		Location
Newhall	Aztec Oil Co., Sanborn	1	6, 3-16	6836	Drilling
	James C. Brazell, Perkins	1	11, 3-16	4473	Pumping
	So. Calif. Pet. Corp., Lassalle 44-1		3, 3-16		Location
Puente Hills	Commonwealth Oil Co.,Roland	1	14, 2-10	2098	Testing
	Melvin Hansen, Dragna	1	24, 2-10	2651	Reaming
Rio Hondo	PotreroOil Co.,Newman	1	32, 1-11	5497	Resuming
San Fernando	TideWater Assoc., Sesnon	1	28, 3-16	9008	Drilling
Whittier-La Habra	Los Nietos Valley Oil Co., Woodward		29, 2-11	3317	Idle
	Orange County				
Buena Park	The Texas Co., Buena Park 4F	1	36, 3-11	8985	Drilling
Stanton	J E. F. Oil Co., Well	1	23, 4-11		Material
	Riverside County				
San Jacinto	Wonder Oil Co., Stroh	1	30, 4-1	1304	Drilling
	San Bernardino County				
Carbon Canyon	Stella, E. F., McDermott	2	5, 3-8	879	Fishing
	Municipal Oil Co., Mahala	1	13, 3-8	4217	Rng. liner

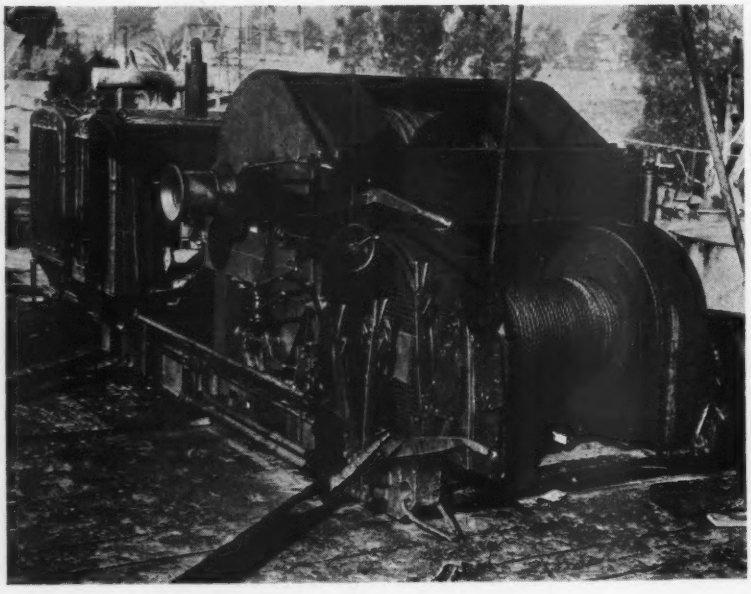
after once making a small amount of gas in the Porter 12 zone at 8912 ft., is coring oil sand at 9076 ft. A short formation trial at bottom flowed approximately 100 bbls. per hour clean 23 gravity oil, indicating a probable major field extension.

Rio Hondo Try Rigs To Resume

Potrero Oil Co. Newmann No. 1, sec. 32,1s-11w, is rigging equipment to resume drilling from present bottom at 5497 ft. The try is located in the Rio Hondo area at the northeast edge of the old Montebello field.

San Berdu Well To Make Test

Municipal Oil Co.'s redrill job on the old Mahala Oil & Gas Co. No. 1, sec. 13,3s8w in San Bernardino county, bottomed its new hole at 3804 ft. in oil sand entered at approximately 3740 ft. and is preparing to run 5¾-in. gravel packed liner for trial.



Typical of The Oil Tool Corporation rental equipment is this Wilson double drum twin engine drilling unit.

•

Butane Drilling Rigs for sale or rent
Drilling Depths 1000 to 9000 ft.

•

The Oil Tool Corporation

3075 Cherry Ave. Long Beach
Phone 481-81 L. A. Phone NEvada 610-24

On section 5 of the township, the E. F. Stella McDermont No. 2 is washing down along side drill pipe stuck at 590 ft. after reaching 879 ft.

Del Valle Driller Cores Deep Section

R. E. Havenstrite, Operator's Barnes No. 2 on sec. 16,4n-17w in the easterly field pool, is coring hard shale at 9213 ft. to make a thorough test of the section before completing in the already established normal field zones as well as the yet unnamed "deep zone" which has proved its ability to produce both high gravity oil and gas in great volume from its best interval of 7866 to 7977 ft. as well as showing some promise at lower levels.

In the westerly pool Herley Kelley is making hole in Handy No. 1 at 1900 ft., while Ohio Oil Co.'s Vasquez No. 5 is moving in machinery. Standard Oil Co.'s latest field completion, Sepulveda No. 4, has been beaned back to 5/64 in. and is making 182 bbls. of clean 35 gravity oil and 240,000 cu. ft. of gas under 1455/2050 lbs. pressure.

Yorba Linda Yet Active

Shell Oil Co., Inc., continues work in the Yorba Linda field with Olinda Fee No. 4-7-15 drilling in oil sand and conglomerate at 1419 ft. after turning No. 78-16 to the tanks flowing 208 bbls. of clean 15.8 gravity oil and 13,000 cu. ft. of gas. The company staked location for No. 42-16 as a 4500 ft. test 5602 ft. north and 2966 ft. west of the centerlines of Citrus and Eureka Avenues.

Guijarral Hills Try Making Hole

Standard Oil Co.'s Pleasant Valley No. 82-29F, in the northeast corner of sec. 29, 20s-16e, is making new hole at 7850 ft. after sidetracking drill pipe struck near bottom in the original 7741 ft. hole. The try seeks production in the Guijarral Hills, southeast of Coalinga Eocene production and northwest of Kettleman North Dome.

Coastal District

Universal Testing Careaga Area "Cat"

Universal Consolidated Oil Co.'s Carega No. 1, in sec. 5,8n-33w, south of the old Orcutt field in Santa Barbara county, bottomed in Temblor siltstone and shell at 6123 ft., plugged to approximately 5320 ft. and is testing below 5200 ft. No results were available at press time.

Cat Canyon Area Lacks Oil Shows

The current series of wells seeking extension or discovery around the Cat Canyon field in Santa Barbara county still lack promising showings. On sec. 25,9n-33w, Bel-Air Oil Co. Williams No. 1, which failed to produce on repeated swabbing tests at 5375 ft., deepened to 5489 ft. where it again swabbed dry and is currently deepening in hard brown shale at 5591 ft. The well had a few oil shows in the Sisquoc at 2450 ft. and a medium good ditch in the Miocene shales which flowed a small amount of heavy oil on test before sanding up.

The Standard Oil Co. Los Flores No. 5, sec. 21,9s-33w, is suspended at 5605 ft. after the last core showed the project to be still in the Sisquoc. No tests were made, indicating that the sand sections were unpromising. The company's South Basin-Lloyd Comm. No. 1, on section 15 of the township, is coring brown shale at 6190 ft. Top of the Monterey Shale was entered at approximately 4700 ft. with formation tests at intervals to present bottom recovering only mud and slight gas shows. A test of Sisquoc oil sand and gray sand from 4150 to 4300 ft. recovered some heavy oil and mud.

Bardsdale Try Fishing

Robert S. Lytle, Operator's Elkins No. 1, on sec. 6,3n-19w, is fishing stuck drill pipe after reaching 4368 ft. The try is scheduled to test the Eocene age at this point. No showings have yet been reported with the well consistently spot coring.

Eureka Canyon Well Pumping

El Rika Oil Co.'s second well on sec. 33,4n-18w is on the pump at 667 ft. for an estimated 10 bbls. of 25 gravity oil with the yield cutting some 95.0%. The company is under way with No. 3 on a nearby site and was last reported in sand showing oil at 206 ft. The original well bottomed at 225 ft. and was completed barefoot for 14 bbls. of 27 gravity oil cutting 10.0%.

Tide Water Try Pumping Meagrely

Tide Water Assoc. Oil Co.'s attempts to produce heavy, tar-like oil sands in a 1300 ft. zone above 5956 ft. in its Los Olivos area wildcat, Davis No. 1, are meeting with little success. Even after circulating large volumes of light oil and distillate, the pump returns at press time consist only of mud showing a froth of oil at a 480 bbl. per day rate. It is believed probable, however, that the well will ultimately make a small volume heavy oil pumper.

Honolulu Converts Rincon Tideland Well

Honolulu Oil Corp., is fishing 6⅝ in. pipe in No. 56-3 on the pier over the Whitten Permit at Rincon in Ventura county. Presently bottomed at 2985 ft. as a Miley zone well it is converting to an upper zone producer. Following this remedial work the company will start No. 56-4 as a new well through the common surface casing of No.'s 1, 2 and 3.

COASTAL COUNTIES WILDCATS

Area	Well	No.	Section	Depth	Status
	Santa Barbara County				
Careaga	Univ. Consol. Oil Co., Careaga	1	5, 8-33	6123	Drilling
Cat Canyon	Bel-Air Oil Co., Williams	1	25, 9-33	5591	Drilling
	Standard Oil Co. SBLC	1	15, 9-33	6190	Coring
	Standard Oil Co., Los Flores	5	33, 9-33	5605	Suspended
Gato Ridge	General Pet. Corp., Giorgi	1	13, 8-32		Foundation
Goleta	Security Ld. and Roy. Co. County	1	12, 4-28	1620	Drilling
Lompoc	Alphonzo E. Bell Corp., Lompoc	6	28, 8-34		Grade
	Fickert Oil Co., Ltd., Well	1	8, 7-33		Rig
Los Olivos	Tide Water Assoc. O. Co., Davis	1	33, 8-31	6643	Pumping
	Ventura County				
Bardsdale	Hopland Oil Co., Well	1	1, 3-19	4634	Idle
	Lytle, Robt. S., Opr., Elkins	1	6, 3-19	4540	Drilling
	Santa Marino Oil Co., Elkins	1	7, 3-19		Rig
Conejo	Sycamore Oil Co., Boylan	1	23, 1-20	2747	Idle
Eureka Canyon	El Rika Oil Co., Well	3	33, 4-18	206	Drilling
Ojai	Coates, Spencer D., Pirie	5	7, 4-22	1033	Idle
Piru	Continental Oil Co., Holser	2	14, 4-18		Grade
	Delroy Pet. Corp., Fisk C. H.	1	22, 5-18	2636	Cleaning out
	Pac. West. O. Corp. Temescal	15	4, 4-18		Grading
	T.W.A. Oil Co., Hidden	2	5, 4-18		Grading
Sespe	McCaslin, W. E., Burson	1	19, 4-19	2039	Redrilling
	Merchants Pet. Corp., Cochran	5	1, 4-20	2018	Completing
	Volunteer Pet. Co., Tar Creek	3	28, 5-19	450	Drilling
Timber Canyon	Crude Oils, Inc., West	1	19, 4-20	958	Idle
	Fletcher & Babcock O'Leary	1	29, 4-20		Location

NORTHERN COUNTIES WILDCATS

County	Well	No.	Section	Depth	Status
Contra Costa	Standard Oil Co., Jordan Unit	1	29, 3n-3e		Grading
Glenn	Ohio Oil Co., Willows-Block	A-1	18,20n-2e	3300	Testing
Monterey	Loma Grande Oil Co., Corey	1	23,24s-10e	4318	Idle
	Wm. C. Jensen, Vierra	1	7-13s-2e		Rig
San Benito	Union Oil Co., Friedman	1	13,16s-12e	6002	Drilling
San Joaquin	Standard Oil Co., Blewett Com.	3	23, 3s-6e		Rig
San Luis Obispo	W'n Gulf Oil Co., Huasna Comm	1	35, 31s-14e		Grading
Solano	Standard Oil Co. Fontana Farms	1	23, 3n-1w		Grading
	Standard Oil Co., Suisun Com.	1-2	36, 4n-2w	6007	Testing
	Standard Oil Co., Suisin Comm.	2-1	25,3n-1w	7300	Testing
Tehama	The Texas Co., Walbridge	1A	32,28n-2w	1498	Drilling

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AREA OF LEAK	AIR		STEAM		WATER	
Diameter Inches	Number of cubic feet per month at 75 lb. pressure	Total cost of waste per month 11c per 1000 cubic feet	Pounds wasted per month at 160 lb. pressure	Total cost of waste per month 65c per 1000 lb.	Gallons wasted per month at 60 lb. pressure	Total cost of waste per month 16c per 1000 gallons
1/2"	13,468,000	$1,481.44	1,219,280	$792.53	1,524,100	$243.86
3/8"	7,558,500	831.44	684,290	444.79	855,360	136.86
1/4"	3,366,990	370.37	304,820	198.13	381,020	60.96
1/8"	824,570	90.70	74,650	48.52	93,310	14.93
1/16"	213,000	23.43	19,280	12.53	24,110	3.80
1/32"	52,910	5.82	4,790	3.11	5,990	.96

Enlarged copies of this chart available on request; also Lunkenheimer Catalog 78.

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LUNKENHEIMER VALVES

Superior Plans Northern "Cat"

Superior Oil Co. is reported planning to drill a gas test on Dodge Land Co. holdings in sec. 31,20n-1e, some 17 miles east of Willows and 25 miles due north of Marysville Buttes, each a gas producing center. The objective will be the Cretaceous gas sands.

San Benito Co. Try Continues

Union Oil Co. continues its try at production in the Ciervo area of San Benito county with Friedman No. 1, sec. 13,16s-12e, coring ahead in sandy shale at 6300 ft. Formation tests in the lower section of the hole have all failed due to shoulder failure. However gas showings were obtained uphole in the intervals 2834-2890 ft. and 4090-5179 ft.

Tuscan Buttes Well Flows Water & Gas

While troubled with flowing salt water near the surface, The Texas Co. Walbridge No. 1A gives every indication of ability to produce commercial gas at shallow depth. Located on sec. 32,28n-2w in Tehama county, only 4 ft. away from hole No. 1 which was abandoned at 1068 ft. because of the surface water, the present well makes considerable gas with the bottom at 1498 ft. and 9⅝-in. casing cemented at 944 ft.

Cook Starts Second Well

Peter Cook, Jr., is laying ground work for a second Rio Vista Gas Field well on sec. 7,4n-3e after well No. 1 on section 18 finished flowing 7,597,000 cu. ft. of gas from 4370.

Victory Redrilling Ventura Ave. Well

Victory Oil Co. is redrilling Foster No. 3 at the south flank of the Ventura Avenue field. Now bottomed at 6958 ft. with 9 in. casing at 5925 ft., liner was recovered 22 ft. below the shoe and the balance is being sidetracked.

San Joaquin Valley

Joint Test Drills Deep

The Shell-Standard Oil Co. joint test, Henderson No. 66-22 in the Nicholson area of Fresno county, is drilling in siltstone at 8460 ft. after entering what is believed Cretaceous formation near the 7900 ft. level. Located on sec. 27, 15s-15e, the well is one of much current interest since it is an area long considered potentially productive but to date comparatively untested.

The most recent driller in the area was Union Oil Co.'s Nicholson No. 1, section 17 of the township, which bottomed at 7062 ft. in February of 1938 after placing the Temblor at 5705 ft., the Kreyenhagen at 6175 ft. and the Domengine at 6970 ft.

Americal Quits McKittrick Try

Americal Pet., Inc., mudded its well No. 1 to the surface and moved out equipment after failing to clear the 5450 ft. hole of junk. The test, prior to mechanical trouble, intended to try tight oil sands interspersed with shale which were entered at 5144 ft. and carried to the top of the Miocene shale at approximately 5440 ft.

The well is located on sec. 2, 30s-21e and was originally drilled to 1530 ft. and abandoned in gray shale by F. E. Fairfield late in 1939, with operations resumed by Americal in May of this year.

Tide Water Associated Oil Co., which is conducting a corehole program in the area, is presently drilling Sterling No. 1, sec. 28, 30s-22e, in siltstone at 2161 ft. Macvee Associates, which has a rig up on sec. 33, 29s-21e, is reported ready to start its wildcatting operations in the area.

Southeast Midway Well Progresses

The Texas Co.'s Pioneer Unit Plan No. 2, on sec. 33, 11n-23w southeast of the southerly tip of the Midway-Sunset field, is drilling in hard shale at 7781 ft. This well has been dogged by a series of stuck drill pipe fishing jobs engendered by the different drilling formations encountered. The current well is located slightly more than a quarter of a mile due south of the company's No. 1 which bottomed in hard sand of low permeability at 8869 ft. in the late summer of 1938. The prior driller entered hard gray Eocene sand at 8388 ft. and while some sections of the sands were tested unsuccessfully, the area yet retains considerable promise.

Shell Yet Preparing Tulare Lake Driller

Shell Oil Co., Inc., is still driving piles and assembling barges for its Tulare Lake drilling job, T. S. G. No. 21-28 on lake flooded lands in the northwest corner of sec. 28, 22s-20e some seven miles northeast of the Kettleman North Dome hills.

Little is known of the areas subsurface geology from actual drilling operations for few wells have been put down on the lake shores and those only to shallow depth. The site is not far removed from Dudley Ridge gas production as well as the Kettleman field thus affording multiple adjacent potential producing horizons extending down from the Pleistocene gas sands at Dudley Ridge to the Eocene oil sands at Kettleman.

Belridge Gets More Pumpers

The heavy oil program at South Belridge continues undiminished with well after well rapidly bottoming at an average 850 ft. to yield some 80 bbls. daily 12 to 16 gravity oil each. Currently engaged with consistent development programs are Belridge Oil Co., General Pet. Corp. and Ohio Oil Co., with Union Oil Co. reported ready to resume work on its Hopkins holdings.

Old Coalinga Field Gets New Production

Development of undrilled sections in the Coalinga Old Field is steadily under way with Shell Oil Co., Inc., chalking up the latest completion when No. 167-29, sec. 29, 19s-15e, went on the beam at 2523 ft. making 320 bbls. of 18.8 gravity oil cutting only 3.0%. The company has sev-

SAN JOAQUIN VALLEY WILDCATS

Area	Well	No.	Section	Depth	Status
Fresno County					
Coalinga	The Texas Co.	83-18	18, 21-15		Rigging up
	Lytle, Robt. S., Opr., Lobre	43-24A	24, 19-15		Location
Guijarral Hills	Lytle, Robt. S., Opr., Well	68-28F	28,20-16	11,586	Suspended
	Standard Oil Co., Well	82-29F	29, 20-16	7850	Drilling
Nicholson	Shell-Standard, Henderson	66-22	27, 15-15	8460	Drilling
Kern County					
Comanche Point	L. E. Barat Synd., Ham Johns	1	5,12-18	1604	Idle
	Miesse, R. S. Ham Johns	2	32, 12-18	520	Drilling
Devils Den	Continental Oil Co., Mabry	3	26, 26-18	107	Drilling
McFarland	T.W.A. Oil Co., Strine	35-15	15, 26-26		Rig idle
McKittrick	MacVee Assoc., Well	1	33, 29-21		Rig
	T.W.A. Oil Co., Sterling	1	28, 30-22	2161	Drilling
Midway-SE.	The Texas Co., P.U.P.	2	33, 11-23	7781	Drilling
Mt. Poso	Ring Oil Co., Glide	2	19, 26-28	1685	Drilling
Round Mt.	Gen. Pet. Corp., Bishop	1	14, 28-28		Grading
	Harp & Brown, Olcese	1	17, 28-29		Rig
	Iseminger Bros., Well	1	8, 30-26	255	Drilling.
Strand	T.W.A.O. Co., KCL	56-8	2, 28-28	7950	Drilling
San Luis Obispo County					
Midway, NW.	C.C.M.O. Co., Thomas	1	1, 31-21	5170	Drilling
	C.C.M.O. Co., Well	25-1	1, 32-22	2280	Drilling
Tulare County					
Tulare Lake	Shell Oil Co., Inc., T.S.G.	21-28	28, 22-20		Driving piles

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Directional drilling becomes more efficient than ever when the K-K Whipstock and Removal Sub is employed. For objective drilling, straightening crooked holes or side-tracking lost tools, the K-K Whipstock and Removal Sub does a remarkable job. It permits: 1. Rotation of the drill pipe, without premature failure of the sheer pin, due to torsional stresses. 2. Removal of the whipstock at the will of the operator. 3. "Rotating out" of the drill pipe in the event a tight place is encountered at any point in the hole.

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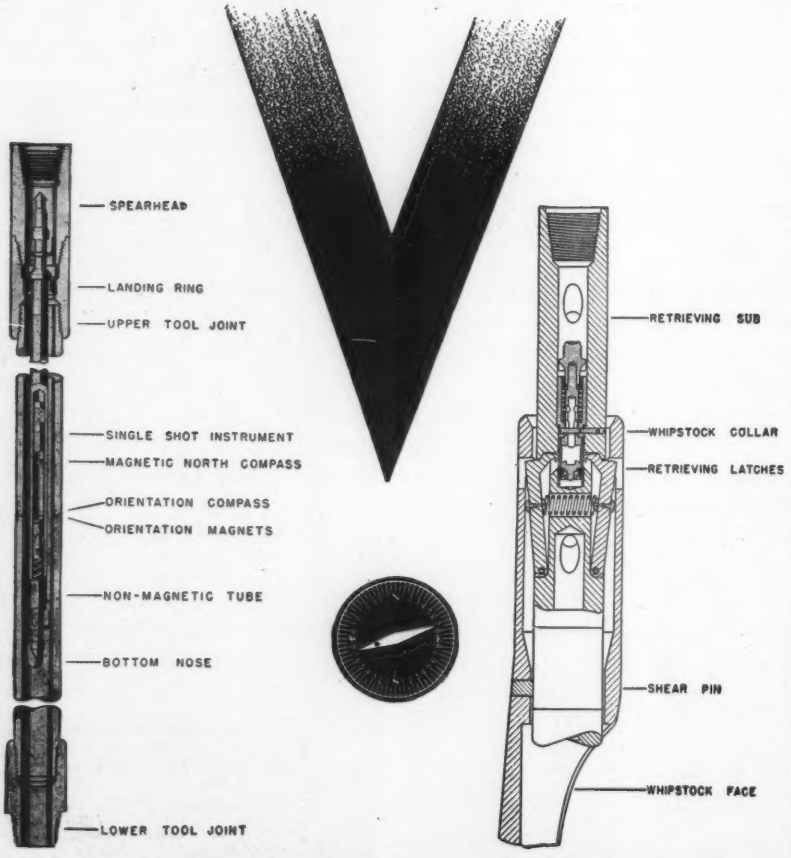

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eral other projects under way with some near completion, as has Standard Oil Co. which this week finished No. 104-35A, sec. 35, 19s-15e, at plugged depth of 2980 ft. pumping clean 20.9 gravity oil at a 120 bbl. rate.

On sec. 6, 20s-15e General Pet. Corp. is finishing Esperanza No. 105 after plugging the 2016 ft. hole with 50 sacks to shut off questionable bottom sands. Top of the good oil sand was entered at 1779 ft. with the Kreyenhagen stubbed into at 2003 ft. The company has built rig for No. 106 in the same section as has The Texas Co. on No. C-3.

Fruitvale Wells Get Recompletions

Western Gulf Oil Co. is under way with a remedial program in the Fruitvale field at the outskirts of Bakersfield. Recent activity was KCL No. B-28 which was deepened and gun perforated in the Martin zone for some 70 bbls. of 20 gravity oil; No. B-42, an abandoned well, which also was deepened and finished at 3070 ft. for 41 bbls. and No. B-18 now bailing for production after deepening to 3668 ft.

The company is redrilling Red Ribbon Ranch No. 12, while No. 13, a grass root job on the lease, is testing at 4240 ft. after pumping 225 bbls. of 16 gravity oil in 18 hours. Rigging up continues on No. 14 for another grass root job.

Two Work At Helm

Amerada Pet. Corp.'s activities in its Helm field in Fresno county consists at present of two wells. Nearest ready for trial is Weyant No. 35-27, sec. 27, 16s-17e, now standing with 5½ in. casing cemented at 8180 ft. after bottoming in siltstone at 8300 ft. The second job, Truman No. F-34-36 on section 36 of the township, is turning to the right below 8163 ft. after coring siltstone at this point.

Production is found in this field from 7300 to 8100 ft. in the Big Blue-Middle and Lower Miocene as well

as Eocene and is taken from Marine fingers in Continental deposits totaling approximately 50 ft. Field complexities vary the gas and oil recoveries from 300 bbls. of 35 gravity black oil to large volume gas and 65 gravity distillate yields. The complete geologic picture is not yet clear since the field was discovered only last year and the drilling program has been deliberately slow and controlled.

K.N.D.A. Testing Eocene Horizon

Kettleman North Dome Assoc.'s well No. 341-12P, sec. 12, 22s-17e, bottomed in Eocene sand at 10,305 ft., ran 4 in. liner including 306 ft. of perforation and is running tubing to test the McAdams zone which was entered at 9985 ft. On sec. 24 21s-16e the Association is redrilling its 10,726 ft. well No. 343-24H at 8399 ft.

Standard Oil Co. is plugging bottom to try for production at 8725 ft. in its 63-13P on section 13, 22s-17e and built rig for 65-31Q at the southerly tip of the field.

Vedder Barren In Mt. Poso "Cat"

Ring Oil Co.'s second wildcat, Glide No. 2, on sec. 19,26s28e at the northwest tip of Mount Poso, entered gray Vedder sand at 1888 ft. and was abandoned at 1903 ft. in the barren sand.

6 Projects Work Riverdale Field

Amerada Pet. Corp. has six projects at varying stages in the Riverdale field of Fresno county. Nearest production is Clemente No. 72-22, which gun perforated opposite Middle Miocene productive sands in the interval 6775-6805 ft. and is swabbing. On an adjacent section Zanolini No. 36-23 bottomed at 6900 ft. and is standing with a solid string of 7-in. casing cemented at 6845 ft. Mathias No. 36-15 is drilling in grass roots at 500 odd ft. while Lawton No. F-33-26 nears the productive horizon at 6700 ft. The company pulled liner in Leal No. F-21-26 for additional work after the well indicated an unwillingness to produce in volume. The newest project is Alves No. 32-22 for which site is being graded 940 ft. south and 990 ft. west of the north quarter corner of sec. 22,17s-19e.

The field was discovered by Amerada in 1941 and lies some 20 miles south of the City of Fresno near the Fresno-Kings county lines. The area is relatively flat on the surface and overlays an anticlinal accumulation of Marine deposits. Brought in under strict flowing control the wells average 550 bbls. of 35 gravity clean oil from some 50 ft. of oil sand closely interrelated with gas and water sands, thus making proper zone selection an exacting choice.

Wilshire Working Jacalitos Flank

Wilshire Annex Oil Co.'s well No. 47-26e is turning to the right at 2200 ft. intending to extend Jacalitos production slightly southwest. The current well is located on the southwest field flank near the south quarter corner of sec. 26, 21s-15e.

This field, discovered by Wilshire in 1941, is located in the steep hills of the Jacalitos anticline on a stratigraphic trap which appears to pinch out toward the southwest. The field produces from Middle Miocene sands some 10 to 35 ft. thick near the 3700 ft. mark with production flowing an average 150 bbls. of 40 gravity oil.

Texaco Enters Williams Play

The Texas Co. is preparing to drill in the newly discovered Williams field in sec. 6,28s-20e, some 5 miles west of the south tip of the North Belridge field in western Kern county.

The new well, Voight No. 54-6, is located 330 ft. north and east of the center of the section, directly offsetting the yet exclusive Shell Oil Co., Inc., production which was discovered in May of this year. The zones, ranging from 2200 to 2350 ft. over the thus far proved area, yields 16.5 gravity clean oil and considerable gas from the upper sands.

Shell Oil Co., Inc.', latest completion in the field is Williams No. 44-6 which bottomed at 2330 ft. to complete flowing 267 bbls. of 16.9 gravity oil cutting 2.8% through a 28/64-in. bean under 50/120 lbs. pressure. No estimate is yet available on gas volume. At this location, one site west of the new Texaco well, the top of the brown shale was 1098 ft., the first gas sands at 1734 ft. the 23-6 zon-a gas and oil sand—at 2090 ft. and the oil bearing 45-6 zone at 2175 ft.

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